

DEPARTMENT OF COMMERCE AND LABOR  
BUREAU OF THE CENSUS

E. DANA DURAND, DIRECTOR

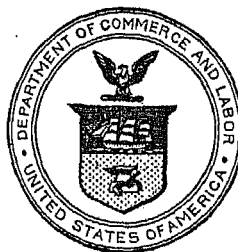
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BULLETIN 113

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SUPPLY AND DISTRIBUTION  
OF COTTON

FOR THE YEAR ENDING AUGUST 31, 1911



WASHINGTON  
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1911

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## LETTER OF TRANSMITTAL.

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DEPARTMENT OF COMMERCE AND LABOR,  
BUREAU OF THE CENSUS,  
*Washington, D. C., November 1, 1911.*

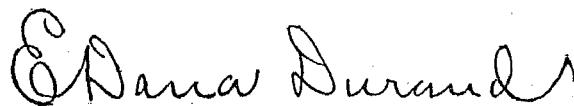
SIR:

I have the honor to transmit herewith Census Bulletin 113, which is a report on the supply and distribution of cotton in the United States for the year ending August 31, 1911. The statistics were collected and compiled under the supervision of Mr. William M. Steuart, chief statistician for manufactures, assisted by Mr. H. J. Zimmerman.

The report is presented in two divisions: (1) The supply of cotton in the United States for the year ending August 31, 1911, and the distribution of the same, together with statistics of spindles, cotton consumed, stocks, and imports and exports of cotton and cotton goods, including comparable statistics for previous years; and (2) the world's spindles and consumption of cotton for 1900 and 1911, together with statistics of the trade in cotton and its manufactures for selected countries. Information is also presented in regard to the world's production of the leading textile fibers in 1909, 1899, and 1889.

During the year ending August 31, 1911, four preliminary reports were issued showing the supply and distribution of cotton for the periods ending October 31, December 31, February 28, and August 31, respectively. The present report, which forms the complement to the report on production, compiled from the returns of the ginneries, gives the aggregate of the figures included in the preliminary statements and covers the seventh consecutive year for which statistics of cotton consumed and cotton stocks have been collected and published by this bureau.

Very respectfully,



*Director of the Census.*

Hon. CHARLES NAGEL,  
*Secretary of Commerce and Labor.*

# SUPPLY AND DISTRIBUTION OF COTTON

FOR THE YEAR ENDING AUGUST 31, 1911.

## GENERAL SUMMARY.

The following summary shows, under certain general headings, the supply of cotton in the United States for the year ending August 31, 1911, and the distribution of this supply. Detailed figures are presented elsewhere in the report.

TABLE 1.—SUPPLY AND DISTRIBUTION OF COTTON IN THE UNITED STATES, FOR THE YEAR ENDING AUGUST 31, 1911.

[The quantities are given in running bales, except that round bales are counted as half bales and foreign cotton has been reduced to equivalent 500-pound bales. Linters are included.]

### SUPPLY.

	Bales.
Total.....	13,873,423
Stocks held September 1, 1910.....	1,040,040
By manufacturers in cotton-growing states.....	121,349
By manufacturers in all other states.....	411,883
In independent warehouses and other public storage places.....	306,808
By other holders (estimated).....	200,000
Net imports, year ending August 31, 1911.....	231,191
Ginnings.....	12,384,248
To balance distribution.....	217,944

### DISTRIBUTION.

Total.....	13,873,423
Cotton consumed.....	4,704,978
By manufacturers in cotton-growing states.....	2,328,487
By manufacturers in all other states.....	2,376,491
Cotton destroyed by fire.....	12,000
Cotton exported.....	7,781,414
Stocks held August 31, 1911.....	1,375,031
By manufacturers in cotton-growing states.....	101,114
By manufacturers in all other states.....	441,077
In independent warehouses and other public storage places.....	432,840
By other holders (estimated).....	400,000

## SUPPLY AND DISTRIBUTION OF COTTON, 1911.

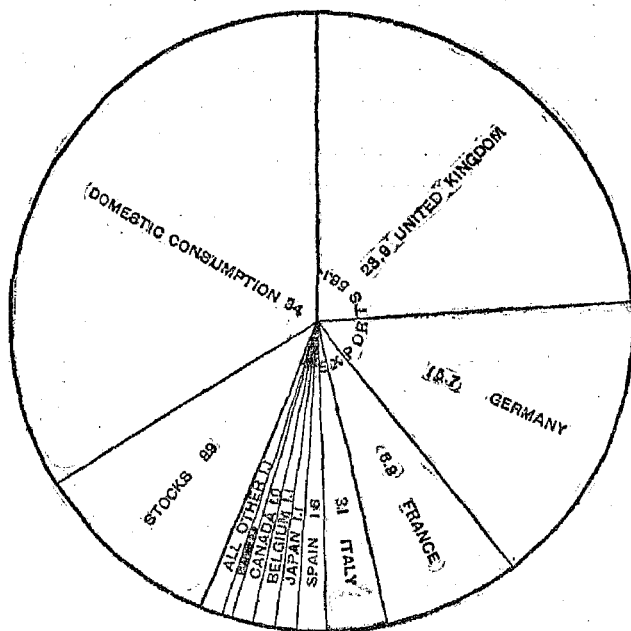
## SUPPLY AND DISTRIBUTION IN GENERAL.

The supply of cotton in the United States for the year ending August 31, 1911, according to Table 1, was 13,873,423 bales, consisting of 1,040,040 bales of stocks carried over from the previous year, 12,384,248 bales of cotton ginned during the year, 231,191 bales imported, and a remainder to balance distribution. In 1910 the supply was 12,188,021 bales, and in 1909, 15,312,885 bales. The variations in the supply practically represent the differences between the crops produced in the United States, since the changes in the stocks held and imports are too small to affect the total noticeably.

Of the total supply of cotton for 1911, shown in the table, 4,716,978 bales, or 34 per cent, including that destroyed by fire, were consumed in this country; 7,781,414 bales, or 56.1 per cent, were exported; while 1,375,031 bales, or 9.9 per cent, remained in the country at the close of the year. Of the supply for the preceding year, 39.5 per cent was consumed at home, 52 per cent was exported, and 8.5 per cent remained in the country at the close of the year.

The consumption of cotton in the United States for the year covered by this report, including that destroyed by fire, was 91,975 bales less than during the year ending August 31, 1910. The exports during the past year were 7,781,414 bales, being 1,442,386 bales greater than for the previous year, when they were the smallest for any one of the last six years.

DIAGRAM 1.—Proportion of supply of cotton for 1911 consumed in the United States, held in stocks, and exported, with distribution of exports by countries to which exported.



The stocks of cotton in the United States at the close of August, 1911, amounted to 1,375,031 bales, compared with 1,040,040 bales on the corresponding date in 1910 and 1,483,585 bales in 1909. Those held by manufacturers amounted to 542,191 bales, which is the smallest amount for any year except 1910 since the inauguration of these reports in 1905, and represents less than a six weeks' supply for the American cotton mills operating under normal conditions.

## METHOD OF COLLECTING AND ASSEMBLING DATA.

The data for the statistics of cotton ginned have been collected by local agents of the Census Bureau who canvass the ginner and delinters. Those for the statistics of cotton consumed, of stocks held by manufacturers, and of stocks in independent warehouses and other public storage places, have been secured by these same local agents in the cotton-growing states, while, in all other states, these data have been collected by correspondence and by special agents who canvassed the important mill centers. Stocks at ports, generally known as "port stocks," were enumerated and returned according to the classes of holders named in the table. The statistics for imports and exports have been compiled by the Bureau of Statistics, Department of Commerce and Labor.

The supply of cotton for the year is obtained by combining stocks held at the beginning of the year with net imports of cotton, cotton ginned, and linters produced, during the 12-month period.

The statistics indicating the distribution of the supply show the quantity of cotton consumed during the year, the amount destroyed by fire, that exported, and stocks in the country at the close of the year. Stocks held have been segregated so as to show the quantity in the possession of manufacturers, both in the cotton-growing states and in all other states, that held in independent warehouses and other public storage places, and the estimated amount in the hands of other holders. As stated above, the canvass for stocks held was limited to manufacturing establishments and independent warehouses and other public storage places.

The estimated stocks held by other holders include baled cotton in the actual possession of merchants, buyers, cottonseed-oil mills, ginner, transportation companies, and producers. Owing to the large number of persons holding these stocks, the fact that the total quantity held on August 31 is comparatively small, and the limited time for collecting the data and compiling the statistics, these holders were not canvassed. A careful consideration of all the elements entering into the problem leads to the judgment that 400,000 bales should be included in Table 1 to cover stocks in their possession on August 31, 1911. This quantity, to a small extent conjectural, is only 2.9 per cent of the total, and is essential to round out a comprehensive statement of the distribution.

The supply as computed from the stocks at the beginning of the year, and the imports and the ginnings during the year exceeds the quantity consumed, the amount exported, and the quantity stored in manufacturing establishments and independent warehouses by 182,056 bales. Because of the exceptional ginnings of the crop of 1911 prior to September 1, the stocks in the possession of other holders is larger than for several years. Including the estimated stocks in the possession of other holders, the statistics of the distribution of cotton presented in

## SUPPLY AND DISTRIBUTION OF COTTON, 1911.

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Table 1 exceed by 217,944 bales the reported supply, and this amount, which is only 1.6 per cent of the total, is accordingly entered in the table under the heading "To balance distribution."

The divergence between the figures for supply and distribution corrected by this balancing entry is readily accounted for. As many agencies and holders have to be canvassed in collecting the data for the statistics on the supply and distribution of cotton, and as numerous conditions exist which affect these data, it is not surprising that a difference should appear in the balance sheet. Among the factors responsible for this condition may be named the following: (1) The inclusion of rebaled samples, commonly called "city crop," in the statistics of distribution; (2) the lack of uniformity on the part of manufacturers and others in returning stocks; and (3) an understatement by ginners and delinters of the quantity of cotton produced, due largely to their inability to make accurate estimates, at the time of the March canvass for production, of the quantity remaining to be ginned and the linters to be obtained from reginning cotton seed. It is impossible to state with any degree of accuracy how much any one or all of these factors contribute to the difference. The amount due to each no doubt varies in different seasons, but a considerable part of the difference between the figures for supply and those for distribution will always be attributable to the first-named cause. Between the time a bale of cotton leaves the ginnery and the time it reaches the consumer it is "sampled" a number of times—that is, small quantities of the fiber are extracted from the bale by successive bidders for use in determining its grade and value. These samples, with other cotton from time to time separated from the original package, are rebaled and the bales are counted in the statistics of exports, consumption, and stocks. Statistics of supply based upon an enumeration of the bales at the ginneries before any samples have been removed show, therefore, a smaller number of bales than the statistics of exports, consumption, and stocks on hand combined, although there is present in each case the same amount of cotton. The amount of this rebaled cotton will vary in different seasons with the size of the crop and other conditions.

Where bales are mentioned in this report without the standard of weight being given, it will be understood that the quantities are expressed in running bales, counting round bales as half bales, that linters are included, and that foreign cotton has been reduced to equivalent 500-pound bales.

### IMPORTS OF COTTON.

The supply of cotton grown in the United States is only slightly augmented by imports from other countries. In Table 2 statistics of the net imports of raw cotton, by countries from which imported, are shown for 1895 and 1900 and for each year from 1905 to 1911, inclusive.

TABLE 2.—*Net imports of raw cotton, by countries from which imported, for year ending August 31, for specified years: 1895 to 1911.*

YEAR.	QUANTITY (EQUIVALENT 500-POUND BALES).				
	Total.	Egypt.	United Kingdom.	Peru.	Other countries.
1911.....	231,101	183,786	9,717	10,221	27,467
1910.....	151,305	102,217	19,435	12,078	17,667
1909.....	105,451	120,985	15,722	13,508	6,236
1908.....	140,869	120,187	13,741	5,586	1,355
1907.....	202,733	160,731	22,403	8,564	1,045
1906.....	135,464	103,660	20,176	7,440	2,179
1905.....	130,182	108,283	14,723	5,941	1,235
1900.....	184,778	106,166	21,810	5,118	1,680
1895.....	99,399	59,864	36,213	2,335	937

The figures given in this table represent net imports. The total quantity of cotton imported into the United States during the year ending August 31, 1911, amounted to 236,114 bales of 500 pounds each. Of this cotton the equivalent of 4,923 bales of 500 pounds each was reexported, leaving in the country 231,191 bales. The increase over the net imports for 1910 is 79,796 bales, and may be accounted for by the increase in the imports of Egyptian cotton. Nearly all the cotton imported is Egyptian, which is used largely in the manufacture of thread, knit goods, and machine lace, and Peruvian, which is used as a substitute for wool in the manufacture of woolen goods. Some Chinese and Indian cotton is being used in this country, but the amount in 1911 was several thousand bales less than in 1910.

### COTTON MANUFACTURING IN THE UNITED STATES.

Table 3 presents comparative statistics by states from 1907 to 1911 for the number of cotton spindles, both total and active, the quantity of domestic and foreign cotton consumed during the year ending August 31, and the quantity of domestic and foreign cotton held by manufacturers on that date. The data from which the statistics have been compiled were collected in the cotton-growing states by the agents appointed to collect the statistics of cotton ginned, and in all other states by correspondence and by representatives detailed from the bureau.

## SUPPLY AND DISTRIBUTION OF COTTON, 1911.

TABLE 3.—SPINDLES, RAW COTTON CONSUMED, AND STOCKS HELD BY MANUFACTURERS ON AUGUST 31, BY STATES: 1907 TO 1911.

[The quantities of cotton are given in running bales, except that round bales are counted as half bales, and foreign cotton has been reduced to equivalent 500-pound bales. Linters are included.]

STATE.	Year.	COTTON SPINDLES. <sup>1</sup>		Spindles consuming cotton mixed with other fibers. <sup>2</sup>	COTTON CONSUMED (BALES).			STOCKS HELD BY MANUFACTURERS (BALES).		
		Total.	Active.		Total.	Domestic.	Foreign.	Total.	Domestic.	Foreign.
United States.....	1911	80,803,662	29,522,597	456,242	4,704,978	4,529,548	175,430	542,191	460,767	81,424
	1910	28,929,093	28,266,862	.....	4,798,953	4,643,179	155,774	533,232	490,835	42,397
	1909	28,573,435	28,018,305	558,702	5,240,719	5,078,981	161,738	907,097	841,534	65,563
	1908	27,984,387	27,508,422	602,940	4,539,090	4,389,462	149,628	594,184	531,881	62,303
	1907	25,939,415	26,376,191	651,251	4,984,936	4,844,568	140,368	1,016,788	936,918	79,870
Alabama.....	1911	967,564	897,414	.....	247,179	246,693	486	11,081	10,908	173
	1910	980,289	935,329	.....	236,188	235,783	405	13,949	13,854	95
	1909	984,534	948,068	.....	250,380	250,140	240	18,511	18,354	157
	1908	930,942	934,042	.....	202,177	201,748	429	11,802	11,013	289
	1907	904,244	876,944	.....	239,149	238,571	578	29,946	28,728	218
Arkansas.....	1911	14,324	6,814	.....	6,523	6,523	.....	1,127	1,127	.....
	1910	16,279	13,754	.....	4,285	4,285	.....	975	975	.....
	1909	14,324	13,724	.....	6,325	6,325	.....	760	760	.....
	1908	14,324	13,700	.....	4,124	4,124	.....	591	591	.....
	1907	14,324	12,072	.....	4,411	4,411	.....	825	825	.....
California.....	1911	17,592	15,000	.....	13,875	12,413	962	2,643	2,258	385
	1910	10,442	10,442	.....	14,803	14,803	.....	2,320	2,320	.....
	1909	15,500	15,500	.....	14,574	14,555	19	1,165	1,165	.....
	1908	15,500	15,500	4,400	12,602	12,602	.....	2,432	2,432	.....
	1907	12,284	12,284	.....	15,997	15,989	8	3,590	3,590	.....
Connecticut.....	1911	1,270,071	1,267,827	45,239	128,991	113,958	15,033	35,846	24,210	11,636
	1910	1,282,232	1,279,416	.....	136,870	122,778	14,092	31,874	28,130	3,744
	1909	1,253,582	1,246,068	39,724	142,685	127,080	14,995	53,081	49,844	3,237
	1908	1,240,295	1,236,908	45,154	128,791	111,080	17,111	35,654	31,557	4,097
	1907	1,222,239	1,216,435	62,630	147,450	131,035	16,385	49,060	39,216	9,844
Georgia.....	1911	1,080,813	1,882,749	5,792	488,738	487,054	1,684	18,699	17,556	1,143
	1910	1,833,244	1,794,067	.....	496,951	493,624	3,327	22,273	21,288	985
	1909	1,831,714	1,797,484	15,612	540,818	538,686	2,132	33,294	31,527	1,767
	1908	1,792,790	1,757,086	13,876	474,986	472,890	2,096	19,732	19,310	422
	1907	1,682,566	1,610,004	14,000	621,777	519,248	2,529	62,400	61,579	821
Illinois.....	1911	43,404	43,404	600	16,598	16,580	68	1,103	1,091	12
	1910	41,082	39,240	.....	17,451	17,427	24	664	657	7
	1909	41,988	41,988	2,776	21,020	21,904	16	2,519	2,517	2
	1908	35,488	35,488	2,774	13,500	13,498	2	1,299	1,299	.....
	1907	31,488	31,488	4,046	13,412	13,389	23	1,575	1,573	2
Indiana.....	1911	127,674	72,854	5,540	14,435	14,392	43	1,468	1,466	2
	1910	125,352	124,104	.....	21,612	21,609	3	2,028	2,014	14
	1909	128,856	128,856	8,904	31,280	31,280	.....	3,429	3,429	.....
	1908	137,277	128,568	8,904	27,586	27,586	.....	1,796	1,796	.....
	1907	134,068	122,568	11,904	27,754	27,742	12	4,445	4,443	2
Kansas.....	1911	10,600	.....	864	2,005	2,003	2	541	540	1
	1910	10,800	5,000	.....	2,457	2,457	.....	480	480	.....
	1909	10,708	10,708	1,440	5,146	5,146	.....	591	591	.....
	1908	10,000	10,000	1,000	3,873	3,873	.....	561	561	.....
	1907	5,000	5,000	2,440	3,004	3,004	.....	963	963	.....
Kentucky.....	1911	96,956	96,956	5,000	19,012	18,997	15	1,718	1,718	.....
	1910	85,044	85,044	.....	23,056	23,056	.....	2,353	2,353	.....
	1909	88,096	83,080	5,000	25,353	25,353	.....	3,555	3,555	.....
	1908	85,700	82,700	14,324	23,566	23,566	.....	4,196	4,196	.....
	1907	85,704	82,704	14,184	25,785	25,785	.....	5,220	5,220	.....
Louisiana.....	1911	86,588	37,676	.....	10,470	10,470	.....	206	206	.....
	1910	87,070	67,902	.....	10,910	10,910	.....	316	316	.....
	1909	89,162	69,162	.....	15,949	15,949	.....	324	324	.....
	1908	80,552	69,552	.....	13,826	13,826	.....	538	538	.....
	1907	88,724	68,724	.....	17,050	17,050	.....	799	799	.....
Maine.....	1911	1,066,552	1,040,632	13,168	161,695	149,899	1,696	25,004	23,568	1,436
	1910	1,037,176	1,028,680	.....	164,841	153,645	1,196	24,330	24,023	307
	1909	1,005,258	990,712	31,436	161,090	160,137	952	51,850	50,742	608
	1908	978,188	978,188	24,632	149,870	149,032	838	27,915	27,498	417
	1907	976,017	966,864	40,853	157,152	156,244	908	37,616	37,140	476
Maryland.....	1911	160,114	140,614	.....	57,892	57,892	.....	2,246	2,246	.....
	1910	153,010	141,966	.....	56,013	56,013	.....	1,645	1,615	.....
	1909	152,265	144,290	9,000	61,294	61,294	.....	2,339	2,339	.....
	1908	161,000	148,816	9,000	54,320	54,320	.....	2,168	2,168	.....
	1907	153,392	142,384	9,000	64,998	64,998	.....	4,445	4,445	.....
Massachusetts.....	1911	10,613,290	10,166,348	53,558	1,144,345	1,048,623	95,722	220,811	179,936	40,875
	1910	9,703,573	9,637,601	.....	1,228,813	1,146,664	82,149	209,852	186,206	23,646
	1909	9,688,637	9,575,451	57,560	1,231,572	1,231,779	89,793	355,474	315,970	39,504
	1908	9,446,380	9,415,363	63,926	1,146,619	1,061,597	85,022	233,024	198,935	34,089
	1907	9,158,389	9,097,236	70,462	1,253,856	1,170,977	76,879	367,098	319,369	47,729
Michigan.....	1911	16,036	16,036	2,172	4,072	4,964	8	1,123	1,122	1
	1910	13,884	13,884	.....	5,991	5,989	2	1,810	1,807	3
	1909	15,876	15,876	2,680	4,534	4,534	.....	2,460	2,460	.....
	1908	15,576	15,576	2,280	4,809	4,809	.....	2,447	2,447	.....
	1907	15,600	15,600	5,432	4,632	4,553	79	1,920	1,914	6
Mississippi.....	1911	183,662	124,272	.....	25,719	25,719	.....	1,057	1,057	.....
	1910	185,280	160,864	.....	29,978	29,978	.....	1,500	1,500	.....
	1909	176,640	159,468	.....	37,522	37,522	.....	2,615	2,615	.....
	1908	173,216	171,720	8,345	34,383	34,383	.....	1,735	1,735	.....
	1907	173,064	162,696	8,404	37,929	37,929	.....	3,491	3,491	.....

<sup>1</sup> Statistics of spindles for 1910 relate to Dec. 31, 1909.<sup>2</sup> Statistics not available for 1910.

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TABLE 3.—SPINDLES, RAW COTTON CONSUMED, AND STOCKS HELD BY MANUFACTURERS ON AUGUST 31, BY STATES: 1907 TO 1911—Continued.

[The quantities of cotton are given in running bales, except that round bales are counted as half bales, and foreign cotton has been reduced to equivalent 500-pound bales. Linters are included.]

STATE.	Year.	COTTON SPINDLES. <sup>1</sup>		Spindles consuming cotton mixed with other fibers. <sup>2</sup>	COTTON CONSUMED (BALES).			STOCKS HELD BY MANUFACTURERS (BALES).		
		Total.	Active.		Total.	Domestic.	Foreign.	Total.	Domestic.	Foreign.
Missouri.....	1911	30,744	30,744	4,059	16,244	16,230	8	1,857	1,856	1
	1910	30,744	30,744	.....	15,038	15,014	24	1,991	1,989	2
	1909	27,776	27,776	2,500	16,711	16,711	.....	2,289	2,289	.....
	1908	27,776	27,776	5,616	10,669	10,669	.....	1,415	1,415	.....
	1907	14,416	14,416	312	9,491	9,491	.....	1,168	1,168	.....
New Hampshire.....	1911	1,462,788	1,441,423	29,237	259,458	250,865	8,593	47,613	43,489	4,124
	1910	1,440,173	1,325,900	.....	265,501	260,055	5,446	39,145	36,291	2,854
	1909	1,313,581	1,313,357	44,897	278,457	275,015	3,442	91,634	90,726	908
	1908	1,320,603	1,318,327	39,302	243,494	240,736	2,758	64,062	62,650	1,412
	1907	1,325,135	1,307,357	50,520	277,941	276,273	1,668	82,966	81,731	1,235
New Jersey.....	1911	483,057	471,021	10,908	53,609	40,166	13,443	13,057	4,689	8,468
	1910	463,403	451,408	.....	62,853	38,534	14,319	10,147	6,161	3,986
	1909	460,888	445,310	27,304	62,416	38,353	14,068	16,395	7,399	7,996
	1908	447,029	441,733	32,112	44,904	33,618	11,286	14,418	7,010	7,408
	1907	435,128	425,791	14,563	48,294	38,583	9,711	9,217	8,920	5,297
New York.....	1911	963,969	905,204	83,400	182,068	179,789	2,279	16,962	16,520	442
	1910	970,445	902,341	.....	199,787	195,875	3,912	14,586	14,042	544
	1909	942,621	931,525	103,330	218,780	215,099	3,711	31,384	30,427	957
	1908	928,316	910,004	106,044	171,289	170,215	1,074	22,094	21,125	969
	1907	927,796	900,506	110,862	191,834	189,980	1,904	37,797	37,546	251
North Carolina.....	1911	3,353,706	3,216,195	6,160	696,987	691,317	5,670	27,127	25,497	1,630
	1910	3,062,061	2,958,235	.....	658,498	655,058	3,440	31,080	30,516	564
	1909	3,010,867	2,934,124	5,452	756,677	753,460	3,217	62,188	61,773	416
	1908	2,944,404	2,861,446	8,240	637,401	635,122	2,279	27,263	27,208	45
	1907	2,681,388	2,604,444	6,556	710,275	707,220	3,055	84,542	84,228	314
Ohio.....	1911	.....	.....	17,512	26,326	26,300	26	9,079	9,077	2
	1910	.....	.....	.....	28,394	28,377	17	7,580	7,580	1
	1909	.....	.....	10,502	28,222	28,221	1	10,633	10,632	1
	1908	.....	.....	10,462	24,483	24,483	.....	13,760	13,754	2
	1907	.....	.....	19,427	24,533	24,517	16	8,564	8,564	.....
Oklahoma.....	1911	5,712	5,712	.....	6,774	6,774	.....	431	431	.....
	1910	5,756	5,756	.....	6,397	6,397	.....	930	930	.....
	1909	5,712	5,712	.....	5,269	5,269	.....	564	564	.....
	1908	5,712	5,712	.....	3,447	3,447	.....	298	298	.....
	1907	2,856	2,856	.....	2,238	2,238	.....	388	388	.....
Pennsylvania.....	1911	280,202	254,120	120,031	67,297	63,008	4,289	8,745	8,308	437
	1910	297,799	278,307	.....	66,885	62,298	4,587	8,288	7,682	606
	1909	276,654	264,437	120,037	80,541	75,334	5,157	12,431	11,071	1,360
	1908	268,510	257,929	134,238	78,071	73,614	4,457	11,120	10,145	975
	1907	278,737	263,205	137,190	86,825	80,671	6,154	12,933	11,708	1,225
Rhode Island.....	1911	2,626,995	2,499,175	5,364	218,034	196,336	21,698	49,315	41,378	7,937
	1910	2,412,272	2,371,777	.....	219,920	200,583	19,337	50,069	45,630	4,439
	1909	2,399,440	2,361,069	7,340	230,425	209,816	20,609	77,815	69,895	7,920
	1908	2,388,105	2,279,057	8,516	215,831	196,936	18,895	54,366	42,558	11,808
	1907	2,242,631	2,213,905	12,556	223,035	205,565	17,470	70,250	64,817	11,433
South Carolina.....	1911	4,187,317	4,098,621	2,760	618,668	615,685	3,013	25,132	22,064	2,468
	1910	3,833,001	3,760,891	.....	627,708	625,025	2,683	33,055	30,554	401
	1909	3,819,149	3,715,894	.....	606,462	603,687	2,775	33,140	32,826	323
	1908	3,713,006	3,617,358	.....	610,734	607,722	3,012	32,783	32,510	273
	1907	3,609,969	3,502,036	.....	608,883	606,381	2,502	96,487	95,608	889
Tennessee.....	1911	253,460	238,656	15,748	70,147	70,104	43	4,900	4,880	20
	1910	272,774	250,630	.....	70,229	70,217	12	5,640	5,640	.....
	1909	272,856	253,762	25,828	69,653	69,653	.....	9,052	9,052	.....
	1908	265,198	249,604	21,754	67,876	67,876	.....	5,362	5,362	.....
	1907	263,148	230,358	23,482	62,522	62,522	.....	10,508	10,508	.....
Texas.....	1911	113,100	90,998	.....	41,310	41,310	.....	2,431	2,431	.....
	1910	108,778	100,854	.....	39,052	39,052	.....	1,723	1,723	.....
	1909	106,628	98,604	.....	42,210	42,210	.....	3,097	3,097	.....
	1908	106,924	103,428	.....	33,635	33,635	.....	2,178	2,178	.....
	1907	109,892	103,992	.....	38,602	38,602	.....	5,443	5,443	.....
Vermont.....	1911	105,276	105,276	11,152	8,669	8,147	522	834	553	281
	1910	105,184	91,712	.....	10,441	9,721	720	647	519	128
	1909	105,184	105,184	15,152	10,210	9,617	593	1,912	1,679	233
	1908	107,324	100,692	17,812	10,230	9,893	337	712	645	67
	1907	107,324	106,720	24,032	13,921	13,473	448	4,470	4,392	78
Virginia.....	1911	372,816	357,816	3,308	77,702	77,700	2	4,770	4,770	.....
	1910	329,174	324,542	.....	70,689	70,657	32	4,154	4,154	.....
	1909	315,076	311,644	4,018	84,176	84,176	.....	6,494	6,494	.....
	1908	295,579	295,579	3,923	75,182	75,182	.....	4,525	4,525	.....
	1907	272,710	250,758	4,738	68,608	68,606	2	9,085	9,085	.....
Wisconsin.....	1911	1,920	1,920	1,068	7,639	7,635	4	1,475	1,475	.....
	1910	13,612	2,112	.....	7,401	7,384	17	1,914	1,912	2
	1909	13,612	2,112	4,104	9,105	9,097	8	1,608	1,607	1
	1908	13,612	13,612	4,040	8,710	8,679	31	1,878	1,878	.....
	1907	13,940	13,940	1,992	9,200	9,166	34	1,628	1,628	.....
All other states.....	1911	7,360	7,360	12,642	22,167	22,046	121	3,790	3,790	10
	1910	7,360	7,360	.....	19,941	19,911	30	4,908	4,908	9
	1909	7,360	7,360	8,136	20,954	20,944	10	6,025	6,011	14
	1908	7,360	7,360	5,726	18,102	18,101	1	2,544	2,544	.....
	1907	6,944	6,944	11,026	14,268	14,265	3	1,999	1,999	.....

<sup>1</sup> Statistics of spindles for 1910 relate to Dec. 31, 1909.

<sup>2</sup> Statistics not available for 1910.



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*Spindles.*—The total number of cotton spindles in the United States, shown in Table 3, represents those designed primarily for spinning cotton, and does not include those which consumed a mixture of cotton with other fibers. The number of cotton spindles returned as having been operated during the year 1911 was 29,522,597, exceeding the number for 1910 by 1,255,735, or 4.4 per cent. The statistics for 1910 being compiled from the returns of manufacturers for the census of 1909 relate, as a rule, to the year ending December 31, 1909, and, for this reason, are not strictly comparable with the statistics shown for the other years which relate to that ending August 31. In 1911, 1,281,065 spindles were returned as idle and as having consumed no cotton whatever during the year. Of these, 407,496 spindles were in plants not operated during the year, and 873,569 in mills which consumed some cotton. The number of idle spindles includes some new spindles which were merely in place for operation at the close of the year and had not then been brought into service.

In the total number of cotton spindles Massachusetts exceeds every other state, having 10,613,290, or 34.5 per cent of the total for the United States; South Carolina ranks second, with 4,187,317, or 13.6 per cent; and North Carolina third, with 3,353,706 spindles, or 10.9 per cent; Rhode Island ranks fourth, Georgia

fifth, New Hampshire sixth, Connecticut seventh, and Maine eighth. No other state reports as many as a million spindles.

In addition to the spindles designed primarily to spin cotton, 456,242 spindles were returned in 1911 as having consumed raw cotton mixed with other fibers during the year. The corresponding numbers in 1909 and 1908 were 558,792 and 602,340, respectively. The variation in the number of spindles so used is due to the fact that, in some instances, spindles employed during one year exclusively on cotton or other fibers, are used during another year in spinning cotton mixed with some other fiber. The states reporting the largest numbers of such spindles are those which lead in the manufacture of woolen and of hosiery and knit goods. Of the total number of these spindles reported, 120,031, or 26.3 per cent, were returned from Pennsylvania; 83,400, or 18.3 per cent, from New York; 53,558 from Massachusetts; and 45,239 from Connecticut.

*Ring and mule spindles.*—Inasmuch as ring spindles consume about 50 per cent more fiber per spindle than mule spindles, it is interesting to know the number of each kind in use. The following table has therefore been prepared, showing by states the number of active ring and mule spindles in the United States in 1909, 1904, 1899, and 1889:

TABLE 4.—NUMBER OF ACTIVE RING AND MULE SPINDLES, BY STATES, FOR SPECIFIED YEARS: 1889 TO 1909.

[The figures include active spindles in cotton mills only.]

STATE.	1909			1904			1899			1889		
	Total.	Ring.	Mule.	Total.	Ring.	Mule.	Total.	Ring.	Mule.	Total.	Ring.	Mule.
United States....	27,305,800	22,079,006	4,716,704	23,155,613	17,033,756	5,221,857	19,008,352	13,444,872	5,563,480	14,188,103	8,824,617	5,363,486
Alabama.....	885,803	882,803	3,000	758,087	751,087	7,000	411,328	403,328	8,000	79,234	69,774	9,460
Connecticut.....	1,241,624	818,074	423,450	1,149,615	702,430	447,476	1,000,674	607,448	393,126	934,155	536,514	397,641
Georgia.....	1,747,483	1,677,987	69,496	1,816,673	1,247,301	569,272	815,645	780,610	84,926	445,462	424,928	20,534
Indiana.....	119,568	110,616	8,952	119,232	101,184	18,048	102,488	86,168	16,320	74,604	58,284	16,320
Kentucky.....	72,066	62,030	10,036	76,102	55,072	21,120	66,638	48,234	18,399	42,042	34,168	8,784
Louisiana.....	59,556	59,556	.....	59,552	59,552	2,500	55,600	55,600	.....	46,200	46,200	.....
Maine.....	1,020,688	859,272	161,316	891,246	607,522	283,724	841,621	584,573	256,948	885,762	541,065	344,697
Maryland.....	133,302	133,302	.....	133,672	133,672	.....	154,064	154,064	.....	158,080	158,080	.....
Massachusetts.....	0,372,364	7,282,153	2,090,211	8,411,240	6,082,189	2,329,050	7,784,687	5,228,371	2,556,316	5,824,618	3,393,769	2,430,719
Mississippi.....	153,804	153,804	800	126,352	126,352	.....	75,122	75,122	.....	87,004	87,004	.....
New Hampshire.....	1,318,932	1,104,386	154,546	1,301,281	1,032,205	269,076	1,243,555	1,056,390	187,165	1,195,643	831,409	364,234
New Jersey.....	420,784	107,381	313,403	436,764	87,960	348,804	431,730	64,638	367,092	374,442	69,962	304,480
New York.....	777,080	417,973	360,007	704,634	323,132	376,502	720,268	353,132	367,136	606,796	272,856	333,940
North Carolina.....	2,008,383	2,849,866	58,518	1,880,950	1,814,190	66,760	1,133,432	1,098,080	35,352	337,756	306,866	30,890
Pennsylvania.....	252,550	131,214	121,336	260,097	145,756	114,341	306,637	182,190	124,447	439,638	263,951	175,687
Rhode Island.....	2,338,689	1,463,346	875,343	2,040,622	1,106,284	850,238	1,880,622	940,294	940,328	1,924,486	1,112,617	811,869
South Carolina.....	3,754,251	3,731,039	23,212	2,864,092	2,848,980	15,112	1,431,340	1,420,597	10,743	332,784	323,784	9,000
Tennessee.....	225,638	215,638	10,000	153,875	143,375	10,500	123,896	103,116	20,780	87,624	75,936	11,688
Texas.....	97,028	97,028	.....	68,170	68,170	.....	48,756	48,756	.....	15,000	15,000	.....
Vermont.....	91,712	75,872	15,840	108,028	80,312	27,716	100,028	56,712	43,316	71,561	28,856	42,705
Virginia.....	316,970	316,970	.....	193,062	189,974	3,088	126,827	124,502	2,325	94,204	81,090	13,114
All other states.....	85,226	68,786	16,440	89,048	73,048	16,000	158,690	122,038	36,652	149,318	122,254	27,064

It is evident, from the statistics shown in Table 4, that the tendency in the United States is to employ ring rather than mule spindles, the latter forming but 17.2 per cent of the total number in 1909, as compared with 22.6 per cent in 1904, 29.3 per cent in 1899, and 37.8 per cent in 1889. Because of the ease and facility with which the ring spindles can be operated, manufacturers use frames rather than mules whenever it is

practicable; in fact, new mules are rarely installed except when very fine filling yarns, soft-twisted knitting yarns, or very coarse yarns made from short-staple cotton or waste are to be spun. Of the total number of mule spindles now employed in the United States in cotton mills, about 79 per cent are in the New England states and most of the others in New York and New Jersey. Since some yarns

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requiring special qualities can not be made satisfactorily by the use of ring spindles, there will always be a demand for mules, unless the difficulties heretofore met with in this regard can be overcome.

*Fineness of yarns produced.*—Closely connected with the subject of spindles is that of their product, yarn. The coarseness or fineness of the yarn determines the

character of the goods, and the production of finer grades usually accompanies the growth of the cotton industry. Because of the interest in this phase of cotton manufacture in the United States, the following table is presented. It shows by states for cotton mills alone the quantity of cotton yarn returned at each of the last three censuses classified according to numbers or counts.

TABLE 5.—PRODUCTION OF YARN, CLASSIFIED ACCORDING TO FINENESS, BY STATES: 1909, 1904, AND 1899.

STATE.	YARN (POUNDS).											
	Total.			No. 20 and under (coarse).			No. 21 to 40 (medium).			No. 41 and over (fine).		
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1909	1904	1899
United States.....	2,037,653,722	1,529,483,718	1,467,565,971	1,014,009,688	803,764,679	850,208,053	860,328,605	601,971,584	540,168,147	157,255,420	123,747,455	77,195,871
Alabama.....	104,311,123	84,595,024	57,806,702	71,581,923	64,938,034	51,325,723	23,208,086	18,698,617	6,541,039	4,400,214	967,773	.....
Connecticut.....	48,241,048	43,622,529	44,808,803	11,780,870	13,068,506	15,034,079	20,407,357	18,368,951	19,280,451	16,052,785	12,185,072	9,804,273
Georgia.....	230,771,195	101,616,003	116,907,671	188,303,084	136,058,017	108,270,364	42,102,121	24,864,304	8,691,307	365,900	604,282	.....
Indiana.....	10,871,110	6,151,356	8,606,072	4,731,055	3,065,950	8,606,072	6,140,061	3,085,466	.....	.....	.....	.....
Kentucky.....	8,796,515	7,305,440	9,071,044	4,623,076	5,493,458	5,818,514	4,173,430	1,901,982	3,252,530	.....	.....	.....
Louisiana <sup>1</sup> .....	7,547,631	5,561,703	7,891,495	7,547,631	5,082,790	7,891,495	.....	478,013	.....	.....	.....	.....
Maine.....	73,887,722	55,988,081	67,003,387	23,826,696	18,715,275	40,530,149	45,282,841	32,084,111	23,008,966	4,778,185	4,578,695	2,864,273
Maryland <sup>2</sup> .....	24,449,126	23,550,570	31,143,023	24,300,580	23,414,644	30,215,181	58,546	135,920	927,842	.....	.....	.....
Massachusetts.....	523,523,228	381,108,770	442,538,758	175,150,251	141,986,900	164,190,352	283,053,020	178,143,116	235,617,217	65,310,057	60,978,754	42,781,189
Mississippi.....	12,078,372	10,004,221	7,909,625	9,539,216	8,144,612	7,909,625	3,080,156	2,580,463	.....	.....	173,146	.....
New Hampshire.....	122,460,975	108,439,062	108,968,243	68,370,303	66,679,541	79,800,860	51,380,977	39,680,978	29,667,374	2,709,695	2,178,543	.....
New Jersey.....	14,658,395	12,550,060	12,230,347	7,223,907	5,242,201	5,360,044	3,818,197	3,581,300	2,979,499	3,616,291	3,726,469	3,884,804
New York.....	60,403,324	43,797,990	42,014,730	31,215,894	21,667,253	25,241,091	28,391,604	21,500,170	16,443,639	796,826	630,561	330,000
North Carolina.....	308,604,753	202,362,469	156,435,539	175,685,089	122,106,707	99,021,341	116,466,984	74,091,014	56,527,998	16,454,680	5,565,748	886,200
Pennsylvania.....	22,636,781	23,157,717	32,468,390	18,131,579	18,445,420	25,344,251	3,745,849	4,434,252	6,754,130	759,353	278,015	870,000
Rhode Island.....	93,406,528	74,900,800	77,238,360	11,007,274	8,775,161	3,661,667	57,301,949	44,925,924	57,341,561	25,097,305	21,289,805	16,235,132
South Carolina.....	284,657,472	230,516,045	195,930,440	125,038,888	108,230,002	132,003,687	143,722,335	112,001,980	63,026,752	15,836,240	10,284,657	.....
Tennessee.....	20,311,310	16,006,737	11,152,567	16,825,402	11,975,474	11,152,567	10,435,968	8,847,416	.....	50,000	132,347	.....
Texas.....	14,373,410	7,630,080	8,210,626	11,796,920	5,378,825	8,210,626	2,576,490	2,251,225	.....	.....	.....	.....
Vermont.....	4,359,021	3,799,474	5,432,933	.....	82,675	1,525,033	3,594,842	3,603,711	3,907,950	764,179	43,083	.....
Virginia.....	32,927,615	18,921,483	15,110,233	22,891,774	9,676,561	13,457,870	10,035,841	9,344,922	1,652,363	.....	.....	.....
All other states <sup>3</sup> .....	7,768,063	6,907,844	8,506,873	5,300,261	5,817,073	4,561,353	2,272,172	1,000,771	3,945,520	195,020	.....	.....

<sup>1</sup> Includes Arkansas.

<sup>2</sup> Includes Delaware.

<sup>3</sup> Includes states as follows: In 1909, Illinois, Kansas, Missouri, and Wisconsin; in 1904, California, Illinois, Missouri, and Wisconsin; and in 1899, California, Illinois, Missouri, and Wisconsin.

The number or count, as applied to cotton yarns, means the number of 840-yard hanks required to weigh 1 pound. No. 1 yarn is a yarn of such grade that 840 yards of it weigh 1 pound, while No. 50 yarn is a yarn of such fineness that 1 pound contains 50 hanks of 840 yards each, or 42,000 yards. The total production of yarn in cotton mills in the United States, as reported at the census of 1909, was 2,037,653,722 pounds, as compared with 1,529,483,718 in 1904, and 1,467,565,971 in 1899. Of the total weight of the production in 1909, 49.8 per cent was No. 20 and under; 42.5 per cent was No. 21 to No. 40; and 7.7 per cent No. 41 and over. Of the total weight in 1904, 52.5 per cent was coarse yarns, 39.4 per cent medium yarns, and 8.1 per cent fine yarns. Nearly three-fourths of the entire production of fine yarns was returned for New England, Massachusetts alone producing about two-fifths of the total for the country. Rhode Island was second with 25,097,000 pounds; North Carolina, third with 16,455,000; Connecticut, fourth with 16,053,000; and South Carolina, fifth with 15,836,000. The increases in the Carolinas during the decade and in Alabama during the last five years are particularly interesting, showing the advance in those states in the manufacture of finer goods.

*Amount of cotton consumed.*—The statistics for consumption presented in Table 3 cover all establishments reported as using raw cotton or linters, including those which use this raw material in the manufacture of mattresses, batting, felts, and other articles, as well as the cotton mills, woolen mills, and knitting factories. The figures are expressed in running bales, except that round bales are counted as half bales and that foreign cotton has been reduced to equivalent 500-pound bales. The quantity of cotton consumed in the United States during the year ending August 31, 1911, was 4,704,978 bales, compared with 4,798,953 bales in 1910, and 5,240,719 bales in 1909. It is the smallest amount for any year since the inauguration of these reports in 1905, with the exception of that year, when the amount consumed, exclusive of foreign cotton, was 4,278,980 bales, and of 1908, when the total was 4,539,090 bales. The average weekly consumption of cotton in the United States last year amounted to about 90,000 bales, compared with 92,000 in 1910, 101,000 in 1909, 87,000 in 1908, and 96,000 in 1907. During the first six months of the year ending August 31, 1911, the quantity of cotton consumed amounted to 2,402,032 bales, while the quantity consumed during the last six months was 2,302,946 bales.

In the consumption of cotton Massachusetts ranks first, using 1,144,345 bales, or 24.3 per cent of the total for the country; North Carolina second, with 696,987 bales, or 14.8 per cent; South Carolina third, with 618,698 bales, or 13.1 per cent; Georgia fourth, with 488,738 bales; New Hampshire fifth, with 259,458 bales; Alabama sixth, with 247,179 bales; and Rhode Island seventh, with 218,034 bales. As already stated, a ranking on the basis of spindles gives a somewhat different order.

*Kinds of cotton consumed.*—The statistics for 1910 and 1911 of raw cotton consumed and of stocks held by manufacturers, which are presented in Table 3 and include both domestic and foreign cotton, are segregated in Table 6 so as to show the consumption of the different kinds of cotton and the amount of each kind held for the United States as a whole, and for the group of cotton-growing states and the group of all other states separately.

TABLE 6.—Segregation of the statistics of the several kinds of raw cotton consumed and of stocks held by manufacturers: 1911 and 1910.

[The quantities are given in running bales, except that round bales are counted as half bales and foreign cotton has been reduced to equivalent 500-pound bales.]

KIND.	RAW COTTON CONSUMED (BALES).		STOCKS HELD BY MANUFACTURERS ON AUGUST 31 (BALES).	
	1911	1910	1911	1910
United States.....	4,704,978	4,708,953	542,191	533,232
Domestic—				
Upland.....	4,258,750	4,390,363	398,065	428,807
Sea-island.....	64,237	75,605	19,230	21,866
Linters.....	206,561	177,211	43,422	40,222
Foreign—				
Egyptian.....	147,102	130,728	70,678	35,013
Peruvian.....	8,903	10,539	1,456	1,450
Indian.....	9,703	11,708	3,900	4,509
Other.....	9,542	2,741	5,351	1,365
Cotton-growing states.....	2,328,487	2,202,833	101,114	121,349
Domestic—				
Upland.....	2,230,225	2,214,598	83,103	108,153
Sea-island.....	7,987	8,985	655	726
Linters.....	79,352	59,827	11,950	10,423
Foreign—				
Egyptian.....	6,578	6,437	4,644	1,083
Peruvian.....	2,002	49	222	655
Indian.....	2,253	2,978	510	309
Other.....	2,376,491	2,500,020	441,077	411,833
All other states.....	2,376,491	2,500,020	441,077	411,833
Domestic—				
Upland.....	2,028,525	2,175,765	314,962	320,654
Sea-island.....	50,250	60,620	18,625	21,140
Linters.....	127,209	118,384	31,442	29,799
Foreign—				
Egyptian.....	140,614	124,291	66,034	33,930
Peruvian.....	8,903	10,490	1,456	1,450
Indian.....	7,701	8,788	3,687	3,854
Other.....	7,289	2,282	4,871	1,055

The total consumption of cotton in the United States in 1911 was 4,704,978 bales, of which 4,258,750 bales were upland, 64,237 bales sea-island, 175,430 bales foreign, and 206,561 bales linters. In the cotton-growing states the consumption was 2,328,487 bales, and in all other states 2,376,491 bales.

Most of the cotton consumed in the United States is domestic upland cotton. The term "upland" is applied to all cotton produced in this country except sea-island cotton and linters, and includes the extra

long-staple varieties which each year are constituting a larger proportion of the total production. The manufacturers in the cotton-growing states use very little sea-island or foreign cotton, only 18,910 bales of both combined in 1911. In all other states the consumption of these kinds of cotton aggregated 220,757 bales. "Linters," the short fiber obtained by the cottonseed-oil mills from reginning cotton seed before extracting the oil, enter into many lines of manufacture in which otherwise it would be necessary to use a better grade of cotton. This fiber, included in the preceding table, is used (1) in upholstering and in the manufacture of mattresses, comforts, batting, cushions, wadding, and pads; (2) for mixing with shoddy and for making low-grade yarns, wrapping twine, cheap rope, and lamp and candle wicks; (3) for making absorbent cotton, and for mixing with wool in hat making; and (4) in the manufacture of gun cotton, niter powder, and writing paper. In the United States the greatest quantity is consumed for the purposes enumerated under (1).

A very large proportion of the foreign cotton consumed in the United States is Egyptian. The principal reasons for its use in this country are: (1) It is well adapted to mercerizing and other processes that give a high finish to cloth; (2) its exceptional clearness and luster, as well as its capacity for taking dyes, fit it for mixing with silk and for filling sateen, India linens, and similar goods having a brilliant surface; (3) the brown color of the Mit Affi variety of this fiber permits it to be used without dyeing in manufacturing such goods as balbriggan underwear and lace curtains in which the écreu shade is desired; and (4) it can be used for the manufacture of sewing thread and other similar articles which require a long fiber of great strength and for which no other type of cotton but sea-island has yet proved suitable. Egyptian cotton is said to be freer from trash and short fibers than American cotton, and for this reason yields less waste in carding and combing.

Because of its wool-like characteristics, rough Peruvian cotton is mixed with wool in the making of woollen textiles. Indian and Chinese cotton are used in this country to a very limited extent for mixing with the American upland cotton in the manufacture of the cheaper grades of goods.

*Growth of the cotton industry since 1840.*—Table 7 shows the advance in the production of cotton in the United States and the growth of the cotton-manufacturing industry in this country since 1840.

These statistics of consumption and active spindles measure the growth of cotton manufacturing. Since 1890 the number of spindles in the United States has more than doubled, and though the quantity of cotton consumed in 1911 was less than that consumed in 1909 or 1910, the consumption for 1909 was more than twice as large as that for 1890.

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TABLE 7.—PRODUCTION AND CONSUMPTION OF COTTON AND NUMBER OF ACTIVE COTTON SPINDLES IN THE UNITED STATES, BY SECTIONS, FOR SPECIFIED YEARS: 1840 TO 1911.

[The quantities are given in running bales, except those for production in 1850, 1860, and 1870, which are in equivalent 400-pound bales, and those for consumption from 1840 to 1870, which are in equivalent 500-pound bales. Linters are included.]

YEAR.	Production (bales).	CONSUMPTION (BALES).				ACTIVE SPINDLES.			
		United States.	Cotton- growing states.	New England states.	All other states.	United States.	Cotton- growing states.	New England states.	All other states.
1911.....	11,965,962	4,704,978	2,328,487	1,911,032	465,399	29,522,597	11,084,623	16,510,981	1,926,993
1910.....	10,886,209	4,798,953	2,292,338	2,016,885	490,234	23,266,862	10,494,112	15,735,086	2,037,664
1909.....	13,432,131	5,240,719	2,553,797	2,144,448	542,474	28,018,305	10,429,200	15,591,851	1,997,254
1908.....	11,325,882	4,539,090	2,187,096	1,894,835	457,159	27,505,422	10,209,903	15,329,333	1,975,186
1907.....	18,305,265	4,984,936	2,410,993	2,073,355	500,583	26,375,191	9,527,964	14,912,517	1,934,710
1906.....	10,725,602	4,909,270	2,373,577	2,050,900	475,802	25,250,096	8,994,868	14,407,580	1,847,648
1905.....	13,697,810	4,278,980	2,140,151	1,753,282	1,885,547	23,687,495	7,631,331	14,202,971	1,853,193
1904.....	9,507,786	3,873,165	1,523,163	1,909,498	440,499	19,472,232	4,867,639	13,171,377	1,338,167
1903.....	7,472,511	2,518,409	638,896	1,502,177	477,337	14,384,180	1,570,288	10,934,297	1,879,595
1899.....	5,755,359	*1,570,344	*188,748	*1,129,498	*252,098	*10,653,435	*561,360	*8,632,087	*1,459,988
1870.....	3,011,996	799,616	68,702	551,250	176,664	7,132,415	327,871	5,498,308	1,306,236
1860.....	5,387,052	845,410	93,553	507,403	184,454	5,235,727	324,062	3,858,962	1,052,713
1850.....	2,409,093	575,506	78,140	430,003	66,763	3,998,022	264,571	2,958,536	774,915
1840.....	2,003,915	236,525	71,000	158,708	6,817	2,284,631	180,927	1,597,394	506,310

\* Does not include foreign cotton.

\* Cotton mills only.

The most significant fact brought out by this table is the rapid growth of the industry in the cotton-growing states. In 1880 there were only 561,360 active cotton spindles in these states, and the quantity of cotton consumed was 188,748 bales. In 1911, 11,084,623 spindles were operated, and the quantity of cotton consumed was 2,328,487 bales. The development is even more marked if the figures for cotton consumption for 1909 are considered. During the nine years ending with 1909, the consumption in these states increased 67.7 per cent, while in the New England states it increased only 12.3 per cent, and in all other states 23.1 per cent. The consumption of cotton for the year ending August 31, 1909, in the cotton-growing states amounted to 48.7 per cent of the total for the country, compared with 40.9 per cent for the New England states, and 10.4 per cent for all other states. The consumption of cotton for the year ending August 31, 1911, in the cotton-growing states was 49.5 per cent of the total for the country; for the New England states, 40.6 per cent; and for all other states, 9.9 per cent. Of the total number of spindles operated during 1911, 37.6 per cent were in the cotton-growing states, 55.9 per cent in the New England states, and 6.5 per cent in all other states. It should be noted that the consumption of cotton for both the United States and the cotton-growing states reached its highest point in 1909. Since that date it has fallen off 10.2 per cent for the country as a whole and 8.8 per cent in the cotton-growing states.

A very large proportion of the cotton produced in the United States is exported. The latest available information concerning the industry in the important manufacturing countries, including statistics of spindles and of cotton consumed, is presented on pages 22 to 27. In addition, statistics of imports and exports

of raw cotton and of cotton manufactures for the most important countries are presented on page 27.

## STOCKS OF COTTON.

The quantity of baled cotton held in the United States on August 31, 1911, according to Table 1, was 1,375,031 bales, as compared with 1,040,040 bales in 1910, 1,483,585 bales in 1909, 1,236,058 bales in 1908, and 1,514,567 bales in 1907. While the amount reported in 1911 was 334,991 bales larger than the corresponding amount held a year previously, the country has not in recent years been so bare of old cotton. Had it not been for the extraordinarily large ginnings from the crop of 1911 prior to September 1—771,297 bales—the stocks held August 31, 1911, would have been much lower than on the corresponding date for any of the years since the Census Bureau began the present series of cotton reports in 1905. Comparative statistics of stocks held by manufacturers on August 31 are shown in Table 3, by states, for the years 1907 to 1911. These stocks amounted to 542,191 bales in 1911, and are the smallest for any year except 1910 since the statistics have been collected by this bureau.

The table following shows by states the quantity of cotton held on August 31 in independent warehouses, compresses, and other public storage places for each year since 1907.

The large quantity of cotton held in independent warehouses and other public storage places on August 31, 1911, is due chiefly to the extraordinarily large ginnings from the crop of 1911 prior to September 1. Stocks held August 31, 1911, amounted to 432,840 bales and were within 11,786 bales of the largest quantity for any year shown. Texas returned 169,270 bales, or 39.1 per cent of the total for the country.

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TABLE 8.—Stocks of cotton held in independent warehouses and other public storage places on August 31, by states: 1907 to 1911.

[The quantities are given in running bales, except that round bales are counted as half bales and foreign cotton has been reduced to equivalent 500-pound bales. Linters are included.]

STATE.	COTTON STOCKS HELD IN INDEPENDENT WAREHOUSES AND PUBLIC STORAGE PLACES (BALES).				
	1911	1910	1909	1908	1907
United States.....	432,840	306,808	325,099	444,026	388,919
Alabama.....	16,965	4,634	13,319	26,700	20,169
Arkansas.....	7,053	5,282	6,846	13,571	9,589
Georgia.....	64,015	23,450	50,568	82,017	34,540
Louisiana.....	32,998	19,624	34,714	34,734	31,292
Mississippi.....	27,682	13,387	17,052	45,789	10,577
Missouri.....	927	3,039	8,544	10,471	6,040
North Carolina.....	1,090	5,393	1,858	6,597	4,618
South Carolina.....	6,833	7,330	10,425	31,117	12,703
Tennessee.....	17,960	5,531	7,448	10,375	19,282
Texas.....	169,270	66,786	78,657	90,506	47,011
Virginia.....	2,094	411	4,418	1,982	9,841
All other states.....	85,953	151,041	96,250	84,767	183,257

The following table shows the quantity and location of stocks of cotton held in this country on the several dates for which statistics have been compiled during the last two years:

TABLE 9.—Quantity and location of cotton stocks held on specified dates.

[The quantities are given in running bales, except that round bales are counted as half bales and foreign cotton has been reduced to equivalent 500-pound bales. Linters are included.]

DATE.	COTTON STOCKS HELD (BALES).				
	Total.	By manufacturers.		In independent warehouses.	
		In cotton-growing states.	In all other states.	In cotton-growing states.	In all other states.
August 31:					
1911.....	1,375,031	101,114	441,077	349,072	83,768
1910.....	1,040,040	121,349	411,883	155,871	160,937
1909.....	1,483,585	186,468	720,639	242,747	82,352
October 31:					
1910.....	5,291,945	355,476	340,048	2,249,217	178,919
December 31:					
1910.....	5,583,535	610,559	741,890	2,737,340	329,875
1909.....	5,301,612	741,320	869,932	2,293,234	213,384
February 28:					
1911.....	4,048,072	583,512	941,440	1,471,116	315,890
1910.....	4,436,240	668,938	1,024,109	1,671,350	232,000
					839,801

## COTTON EXPORTS.

*Exports of cotton, by customs districts.*—The exports of domestic raw cotton represent 56.1 per cent of the total distribution for the year ending August 31, 1911. The table following shows the amount exported, by customs districts, for the years ending August 31, 1907 to 1911, respectively.

The exports of domestic raw cotton from the United States in 1911 amounted to 7,781,414 bales, which exceeded the amount for the previous year by 1,442,386 bales, or 22.8 per cent, but were smaller than the exports for 1909, which amounted to 8,574,024 bales.

All but 17.1 per cent of the cotton exported during the year is credited to ports within the cotton-growing states, and only 1,329,684 bales were exported from ports in other states.

In 1911, Galveston, with 2,761,529 bales, ranks first among the ports in the export of cotton. New Orleans, with 1,513,023 bales, Savannah, with 913,430 bales, New York, with 744,479 bales, and Wilmington, N. C., with 383,112 bales, follow in the order named. The combined exports for the first three ports named amount to 5,187,982 bales and represent two-thirds of the total for the country.

TABLE 10.—Exports of domestic raw cotton from the United States, by customs districts, for the year ending August 31: 1907 to 1911.

[Compiled by the Bureau of Statistics, Department of Commerce and Labor.]

CUSTOMS DISTRICT.	EXPORTS (RUNNING BALES).				
	1911	1910	1909	1908	1907
Total.....	7,781,414	6,330,028	8,574,024	7,573,340	8,503,265
Bangor, Me.....	27	85	972	682	240
Passamaquoddy, Me.....	5,602	6,411	6,508	7,950	4,501
Portland and Falmouth, Me.....	669	427	796	1	7,399
Boston and Charlestown, Mass.....	100,921	106,309	106,735	156,780	156,788
New York, N. Y.....	744,479	734,230	453,540	619,453	480,476
Philadelphia, Pa.....	68,177	62,558	69,639	56,138	41,001
Baltimore, Md.....	119,584	57,717	128,474	117,932	165,221
Norfolk and Portsmouth, Va.....	16,010	6,810	36,653	42,621	15,654
Wilmington, N. C.....	383,112	298,595	403,209	492,830	317,507
Charleston, S. C.....	125,985	116,006	82,759	44,518	21,429
Savannah, Ga.....	913,430	772,038	921,239	892,080	923,679
Brunswick, Ga.....	187,523	191,582	283,026	176,015	141,940
Pensacola, Fla.....	124,056	144,513	169,460	173,213	155,701
Mobile, Ala.....	185,218	155,046	306,964	259,590	163,203
Pearl River, Miss.....	34,211	8,892	20,221		
New Orleans, La.....	1,513,023	1,193,922	1,957,466	1,870,709	2,072,387
Sabine, Tex.....	206,943	142,381	183,234	108,500	13,711
Galveston, Tex.....	2,761,529	2,130,524	3,175,890	2,301,168	3,448,006
Saluria, Tex.....	50	620	1,420	462	
Paso del Norte, Tex.....	144	916	2,405	329	
Corpus Christi, Tex.....	491	1,927	6,116	677	575
Porto Rico.....	90	157	208	117	16
Arizona.....	955	1,025	499	624	3
San Francisco, Cal.....	84,955	60,169	82,528	48,672	83,123
Portland, Ore.....	500	200	300	1,050	1,001
Puget Sound, Wash.....	57,249	33,802	79,128	101,800	146,645
North and South Dakota.....	35	655	275	115	4,232
Minnesota.....	278	187	267	209	63
Detroit, Mich.....	68,431	49,574	70,170	54,868	88,804
Huron, Mich.....	32,181	30,305	24,444	23,542	19,574
Niagara, N. Y.....	1,201	698	630	681	338
Buffalo Creek, N. Y.....	4,753	1,462	1,448	769	791
Champlain, N. Y.....	1,920	3,428	1,280	1,006	10,509
Oswegatchie, N. Y.....	1,205	1,462	8,150	337	3,667
Vermont, Vt.....	5,234	4,025	2,725	6,851	2,854
Memphremagog, Vt.....	22,118	20,350	20,245	10,469	11,967

\* Includes Newport News.

\* Includes Jacksonville, Fernandina, and Key West.

\* Includes with exports from Galveston prior to Mar. 1, 1907.

\* Includes Brazos de Santiago.

\* Includes Cape Vincent.

*Receipts of cotton, by ports.*—The term "net receipts of cotton," as here employed, means the amount of domestic cotton received which has not been transhipped from some other port and already included in the latter's receipts. These statistics must not be confused with those of exports. They include large quantities of cotton carried in the coastwise trade to New England and other northern states and consumed in this country. The statistics of such net receipts for the principal cotton-handling ports are presented in Table 11.

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TABLE 11.—NET RECEIPTS OF RAW COTTON AT PRINCIPAL COTTON PORTS FOR THE YEAR ENDING AUGUST 31, FOR SPECIFIED YEARS: 1875 TO 1911.

[Compiled from Commerce and Finance of the United States.]

PORT.	NET RECEIPTS OF COTTON (RUNNING BALES).											
	1911	1910	1909	1908	1907	1905	1900	1895	1890	1885	1880	1875
Galveston.....	2,048,354	2,501,412	3,657,156	2,633,429	3,891,605	2,879,336	1,710,263	1,659,999	860,112	463,463	480,352	354,927
New Orleans.....	1,603,208	1,315,323	2,063,232	1,895,204	2,298,971	2,689,520	1,567,153	2,534,115	1,973,571	1,523,592	1,504,054	993,481
Mobile.....	1,378,204	255,665	303,311	1,516,321	260,300	329,556	1,340,646	253,187	261,957	237,071	355,971	320,822
Pensacola.....	(*)	138,234	186,616	(*)	149,639	195,151	(*)	(*)	(*)	(*)	(*)	(*)
Brunswick.....	218,946	227,301	325,127	214,496	163,928	199,193	94,278	(*)	(*)	(*)	(*)	(*)
Savannah.....	1,462,152	1,365,825	1,520,105	1,531,502	1,468,638	1,877,343	1,088,807	944,410	956,517	728,087	741,013	606,727
Charleston.....	286,528	228,728	210,574	203,491	149,024	225,366	265,523	425,487	327,070	507,802	464,332	412,931
Wilmington.....	410,182	312,511	409,656	501,483	322,668	375,883	282,360	234,621	134,018	94,054	78,876	70,601
Norfolk and New- port News.....	593,681	537,363	649,162	578,151	642,895	841,174	432,727	472,540	404,050	545,418	590,032	387,279
Baltimore.....	119,104	85,520	104,836	89,735	70,825	72,427	161,648	(*)	(*)	(*)	(*)	(*)
Philadelphia.....	515	2,581	6,848	9,803	11,021	13,645	36,233	(*)	(*)	(*)	(*)	(*)
New York.....	14,700	40,706	19,181	4,223	23,108	32,708	119,215	137,704	176,502	99,200	229,426	179,163
Boston.....	39,093	14,792	19,480	15,822	72,655	83,644	118,891	(*)	(*)	(*)	(*)	(*)

\* Includes receipts of Pensacola.

\* Included in receipts of Mobile.

\* Not shown separately.

The three most important ports are Galveston, New Orleans, and Savannah, and their net receipts during the year ending August 31, 1911, amounted to 6,018,714 bales, or nearly one-half of the total quantity of cotton produced in the country. The large net receipts at Galveston in the last year are due to the increase in cotton production in Texas

and Oklahoma and to the increased transportation facilities.

*Exports of cotton, by countries to which exported.*—The annual exports of domestic raw cotton from 1821 to 1911 by countries to which exported, and the total value of these exports, are shown in the table on page 16.



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TABLE 12.—EXPORTS OF DOMESTIC COTTON—TOTAL VALUE, AND QUANTITY BY COUNTRIES TO WHICH EXPORTED: 1821 TO 1911.

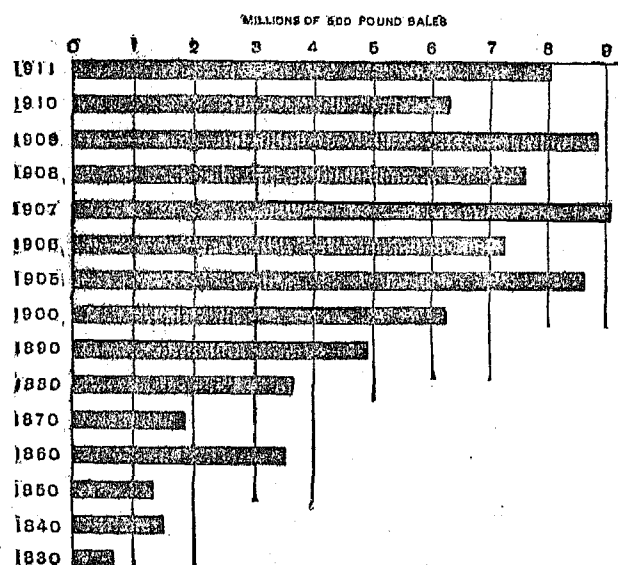
[Compiled from Commerce and Navigation of the United States. The statistics of exports differ slightly since 1865 from those shown in Table 16 because of a difference in the years to which they relate. The figures of this table are for fiscal years.]

YEAR.	Total value.	QUANTITY (500-POUND BALES).														All other countries.
		Total.	United Kingdom.	Germany.	France.	Italy.	Spain.	Belgium.	Russia.	Austria-Hungary.	Netherlands.	All other Europe.	Japan.	Canada.	Mexico.	
1911.	\$585,318,869	8,067,882	3,461,054	2,202,707	1,021,998	436,296	242,073	150,225	84,941	79,530	18,124	48,713	156,724	156,824	4,631	4,042
1910.	450,447,243	6,413,416	2,444,558	1,887,657	968,422	393,327	173,455	102,346	67,203	57,220	18,823	43,378	95,000	125,592	29,004	1,831
1909.	417,390,605	8,895,970	3,065,355	2,438,090	1,098,173	565,695	301,789	167,631	96,675	94,782	30,129	58,174	208,943	131,453	42,575	6,506
1908.	437,788,202	7,633,937	2,956,352	2,385,663	889,083	418,921	202,744	119,470	98,371	90,049	27,084	62,125	200,396	113,997	4,767	4,375
1907.	481,277,797	9,036,494	3,966,119	2,315,651	1,006,633	567,016	276,868	154,168	121,141	113,630	29,092	65,093	262,283	150,343	732	7,775
1906.	401,005,921	7,268,090	3,181,143	1,871,441	817,583	486,607	241,747	114,673	112,480	56,375	18,490	44,486	147,269	141,908	29,285	4,603
1905.	379,965,014	8,609,693	3,067,252	2,011,079	818,304	534,735	295,637	145,664	129,060	62,672	31,163	72,911	336,575	115,657	70,682	9,405
1904.	370,811,240	6,126,386	2,475,762	1,797,354	734,286	363,295	184,862	105,213	168,506	28,158	16,655	61,488	45,870	88,795	56,172	580
1903.	316,180,429	7,086,086	2,799,090	1,915,094	806,673	444,950	206,336	167,351	181,938	39,912	42,542	82,243	152,826	127,640	66,507	2,978
1902.	290,651,819	7,001,558	3,132,324	1,705,815	775,773	446,437	270,602	132,232	73,446	39,767	22,418	61,679	178,605	129,016	27,500	7,054
1901.	313,673,443	6,661,781	3,100,857	1,620,935	754,329	365,359	237,340	154,082	53,171	37,238	53,180	52,325	78,558	102,980	35,103	718
1900.	241,832,737	6,201,166	2,302,123	1,019,173	736,092	443,951	245,612	148,319	54,950	44,919	74,635	65,635	323,202	109,983	18,522	13,045
1899.	209,504,774	7,540,821	3,600,444	1,728,975	803,406	417,363	248,635	129,524	55,012	57,127	51,621	84,500	182,734	98,230	36,130	4,130
1898.	230,442,215	7,700,529	3,532,101	1,858,525	842,038	387,581	263,648	161,941	103,825	35,614	43,509	69,189	224,214	122,495	42,433	13,416
1897.	230,890,971	6,207,510	3,127,186	1,371,577	716,025	323,117	219,088	83,485	84,570	23,971	34,731	48,790	64,022	80,408	30,207	333
1896.	190,050,460	4,670,453	2,267,222	1,038,457	478,265	261,044	216,178	87,966	91,622	15,912	14,219	51,807	40,388	68,074	38,517	322
1895.	204,900,990	7,034,866	3,553,782	1,504,631	790,609	332,656	255,679	145,340	141,968	24,852	25,999	55,819	22,130	105,534	75,953	294
1894.	210,869,289	5,395,665	2,970,903	909,889	610,854	211,710	225,364	128,907	140,052	960	18,581	39,686	9,003	65,085	35,165	270
1893.	188,771,445	4,424,230	2,363,176	850,387	568,059	160,019	200,212	90,399	86,350	20,614	22,449	1,586	62,968	41,812	173	173
1892.	253,461,241	5,870,440	3,381,685	964,888	692,785	171,003	187,458	134,873	134,302	10,052	27,629	38,996	3,149	79,228	44,235	276
1891.	290,712,898	5,814,718	3,401,212	1,019,144	553,100	194,022	218,836	97,423	135,611	4,447	43,609	47,478	4,813	69,261	25,682	20
1890.	250,968,792	4,943,600	2,905,152	837,641	494,759	129,751	175,339	93,588	193,163	300	17,438	19,927	58,473	26,095	1,974	1,974
1889.	237,775,270	4,769,633	2,940,800	660,766	400,197	131,068	181,533	147,807	144,036	5,610	44,354	18,264	61,143	33,802	263	263
1888.	223,016,760	4,528,242	2,838,525	600,624	392,197	110,375	169,331	180,791	216,795	27,725	18,255	20,519	52,052	11,414	152	152
1887.	206,222,067	4,338,915	2,713,515	601,664	466,090	73,222	138,499	110,288	151,267	43,735	20,519	20,519	47,904	11,951	261	261
1886.	205,085,042	4,116,075	2,444,482	509,435	401,643	110,473	168,414	125,069	184,024	5,252	31,672	16,053	37,425	21,035	198	198
1885.	201,962,458	3,783,319	2,410,834	468,987	361,462	79,041	136,310	85,064	135,131	9,808	37,930	17,750	26,398	11,754	151	151
1884.	197,015,204	3,725,145	2,384,254	303,055	457,369	61,725	136,928	80,863	193,639	1,762	53,913	11,027	19,216	22,368	26	26
1883.	247,328,721	4,676,160	2,776,411	538,583	428,829	80,007	196,939	42,055	347,364	4,656	67,610	28,780	32,636	41,555	535	535
1882.	189,812,644	3,479,952	2,361,793	324,902	333,541	44,073	115,264	4,732	184,233	189	33,820	16,706	35,159	25,075	405	405
1881.	247,695,746	4,381,857	2,729,672	466,192	553,854	75,145	127,741	18,318	267,714	4,218	67,502	18,211	25,990	26,772	558	558
1880.	211,535,005	3,644,122	2,433,255	308,045	359,093	50,126	133,873	17,896	204,500	1,099	65,325	21,007	19,619	19,763	231	231
1879.	162,304,250	3,256,746	1,907,549	274,969	393,977	47,617	141,215	19,127	208,467	2,633	51,734	13,290	15,481	19,796	821	821
1878.	180,031,494	3,215,067	2,079,897	243,298	472,062	36,221	81,871	28,383	170,458	3,636	55,909	22,413	14,165	6,844	10	10
1877.	171,118,058	2,890,738	2,040,731	155,211	438,178	23,096	92,061	4,597	50,219	53,711	13,202	13,202	11,017	7,940	775	775
1876.	192,650,202	2,882,811	1,914,600	217,092	407,952	46,759	95,122	31,076	161,794	68,532	15,019	15,019	9,961	13,945	899	899
1875.	190,638,625	2,520,838	1,823,884	150,570	310,279	18,084	60,627	6,227	131,417	8,141	2,876	2,876	7,123	2,610	849	849
1874.	211,223,580	2,717,205	1,807,144	229,227	364,731	24,597	106,718	17,107	108,181	38,009	18,041	18,041	8,022	4,679	849	849
1873.	227,243,069	2,400,127	1,717,290	190,685	226,740	30,508	55,444	24,253	99,147	2,758	38,172	10,916	2,988	1,011	66	66
1872.	180,684,505	1,867,075	1,407,830	85,033	176,374	11,845	65,142	20,187	49,367	45,570	1	1	3,792	1,014	10	10
1871.	218,327,109	2,225,850	2,204,645	207,972	119,223	42,915	94,312	85,867	62,271	4,830	111,406	14,220	4,786	22,619	1,291	1,291
1870.	227,027,624	1,917,117	1,298,332	173,562	300,293	14,549	55,409	3,452	30,341	17,050	1,621	1,621	3,122	13,219	177	177
1869.	162,038,052	1,288,656	873,087	140,855	201,116	8,956	32,817	374	19,525	5,831	636	636	2,244	4,084	231	231
1868.	152,820,733	1,569,627	1,120,030	152,643	186,466	12,066	51,241	1,608	11,748	331	5,045	676	2,091	16,457	126	126
1867.	201,470,423	1,322,947	1,048,641	56,396	167,858	7,223	22,068	1,775	10,179	514	214	214	1,288	6,622	169	169
1866.	281,385,223	1,301,146	1,024,728	82,276	216,470	397	17,631	653	5,372	283	1,107	1,107	1,043	101	485	485
1865.	6,836,600	13,214	12,009	283	714	117	117	117	117	26	26	26	184	835	24	24
1864.	9,895,854	23,998	19,302	47	3,557	117	117	117	117	26	26	26	110	835	20	20
1863.	6,652,405	22,770	19,681	2,534	2,534	117	117	117	117	26	26	26	303	835	226	226
1862.	1,180,113	10,129	7,091	17	46	1,688	1,166	1,166	1,166	5,302	5,301	1,767	116	835	8	8
1861.	34,051,483	615,032	414,685	23,798	114,541	9,373	22,310	11,364	8,502	14,943	25,515	30,013	303	2,821	267	267
1860.	101,806,555	3,535,373	2,528,274	132,14,												

The statistics in Table 12 are given in equivalent 500-pound bales and cover the fiscal year ending June 30, while those in Table 10 are in running bales, counting round as half bales, and relate to the year ending August 31. Table 12 shows the development of the export trade in raw cotton to the several countries during the past 90 years. The total quantity exported during the year ending June 30, 1911, amounted to 8,067,882 bales of 500 pounds each, valued at \$585,318,869. Of this cotton, 3,461,054 bales, or 42.9 per cent, went to the United Kingdom; 2,202,707 bales, or 27.3 per cent, to Germany; and 1,021,998 bales, or 12.7 per cent, to France—these three countries taking 82.9 per cent of the total quantity exported.

The development of the export trade in domestic raw cotton from 1830 to 1911 is graphically represented by the accompanying diagram.

DIAGRAM 2.—Exports of domestic cotton for specified years: 1830 to 1911.



*Exports of sea-island cotton.*—Because of the interest that attaches to sea-island cotton, on account of its special use in the textile manufacturing industries,

statistics of exports of this fiber, by countries to which exported, are given in the following table for the years 1906 to 1911, and for selected years since 1885. It should be understood that these exports are included in the general statistics of exports of domestic cotton shown in the other tables of this report:

TABLE 13.—Exports of sea-island cotton, by countries to which exported, for the year ending August 31, for specified years: 1885 to 1911.

YEAR.	QUANTITY (EQUIVALENT 500-POUND BALES).				
	Total.	United Kingdom.	France.	Germany.	All other countries.
1911.....	17,797	12,818	4,077	482	420
1910.....	22,748	18,154	4,074	520	569
1909.....	19,654	13,589	5,070	426	569
1908.....	25,687	17,874	7,112	413	188
1907.....	15,252	11,066	3,925	185	86
1906.....	31,624	23,870	6,787	838	129
1905.....	36,240	30,131	5,193	796	120
1895.....	30,455	26,350	3,875	36	191
1890.....	18,568	16,853	1,420	169	126
1885.....	13,708	11,950	1,560	13	185

The production of sea-island cotton in 1910, according to returns of ginneries, was 90,368 bales, equivalent to 35,540,000 pounds. Twenty-five per cent of this crop was exported, as compared with 31.2 per cent of the previous year's crop, and 37.6 per cent of the crop of 1907. The United Kingdom took more than two-thirds of the entire amount exported during the year ending August 31, 1911, and France most of the remainder. The quantity consumed in this country during the year amounted to 64,237 running bales, which, added to the quantity exported, 23,308 bales, indicates a small addition to stocks of this kind of cotton over those at the end of the previous year.

#### EXPORTS AND IMPORTS OF COTTON MANUFACTURES.

The statistics of exports of domestic manufactures of cotton for the last fiscal year, by countries to which exported, are presented in Table 14.



## SUPPLY AND DISTRIBUTION OF COTTON, 1911.

TABLE 14.—EXPORTS OF DOMESTIC MANUFACTURES OF COTTON, BY COUNTRIES TO WHICH EXPORTED, FOR THE YEAR ENDING JUNE 30, 1911.

[Compiled by the Bureau of Statistics, Department of Commerce and Labor.]

COUNTRY.	Total value.	CLOTHS.						CLOTHING AND OTHER WEARING APPAREL.		COTTON WASTE.		Yarn (value).	All other manufactures of cotton (value).
		Unbleached.		Bleached.		Dyed, colored, or printed.		Knit goods (value).	All other (value).	Pounds.	Value.		
		Square yards.	Value.	Square yards.	Value.	Square yards.	Value.						
Total.....	\$40,851,918	165,417,652	\$11,798,194	27,419,347	\$2,013,857	153,753,170	\$10,575,048	\$1,046,219	\$5,538,303	49,019,414	\$3,502,982	\$900,557	\$5,170,753
Europe:													
United Kingdom.....	3,511,090	1,108,703	236,544	62,898	13,025	371,024	42,772	683,842	415,767	20,100,419	1,752,676	6,847	360,217
Germany.....	927,166	43,434	13,849	830	201	120,168	13,918	3,673	73,036	14,031,732	772,893	1,033	48,548
Turkey (including Asiatic Turkey).....	335,327	4,325,063	313,243	33,140	3,227	88,871	6,016	2,283	4,258				5,400
Belgium.....	206,530					120	11	1,025	11,615	3,595,981	189,051	17	4,817
Italy.....	80,471	11,590	1,238					3,053	8,095	618,337	63,881		10,239
Netherlands.....	67,174	7,085	1,455			989	100	4,977	33,859	542,307	16,827		9,956
Russia (including Asiatic Russia).....	100,423					308,816	4,019	335	9,259	1,357,731	125,674	2,298	24,938
Spain.....	35,783	53,893	5,008	9,148	1,120	10,196	1,332	125	3,069	11,200	840		23,680
All other Europe.....	43,359							62		377,054	40,400		2,897
Europe.....	113,929	499,368	61,165	594	51	44,986	5,099	3,874	25,059			707	17,374
North America:													
Canada.....	6,474,722	1,772,553	199,104	2,700,904	265,661	6,866,475	633,425	227,747	1,970,053	6,599,031	413,082	177,102	2,538,548
Mexico.....	797,617	510,336	117,584	539,049	58,735	670,707	65,674	32,503	301,901	122,787	7,884	909	212,472
Panama.....	967,409	380,985	46,020	347,519	23,867	4,103,473	250,460	98,410	428,489	439,897	24,876	80	90,111
San Salvador.....	551,242	3,236,577	190,799	85,947	7,104	7,008,948	334,617		4,823	3,849	335	6,355	7,704
Honduras.....	508,922	797,943	42,633	629,269	44,771	4,443,749	270,487	9,110	72,297	10,396	639		62,985
Guatemala.....	373,928	1,103,160	72,531	268,299	24,963	2,903,218	173,888	4,440	31,952	19,402	1,252	15	64,887
Nicaragua.....	462,421	912,468	69,828	404,810	27,925	3,943,737	257,000	2,042	57,311	22,977	1,781	905	45,449
Costa Rica.....	400,833	843,938	59,313	109,901	11,754	4,603,356	261,381	930	40,471	30,428	1,919	544	24,491
British Honduras.....	153,019	88,941	5,904	229,892	15,136	660,069	45,498	4,257	38,733	14,611	787	8	42,696
Juba.....	2,235,850	3,434,009	323,728	2,097,051	187,637	12,720,486	834,668	154,722	376,100	625,187	46,987	5,153	306,305
Haiti.....	1,610,425	1,603,589	103,488	980,170	66,579	18,067,637	1,327,544	1,031	0,539	10,121	805		4,439
Santo Domingo.....	824,026	1,348,614	89,761	870,889	60,237	9,580,438	608,942	20,174	23,067	26,658	1,866	1,419	10,160
British West Indies.....	915,590	703,595	79,872	1,492,333	75,575	9,114,394	540,237	29,944	144,101	23,382	1,757	188	43,922
Dutch West Indies (including Miquelon).....	133,331	323,865	28,965	66,745	4,808	1,583,476	86,624	1,192	7,415	3,490	276	20	9,031
Danish West Indies.....	25,566	15,252	2,450	3,322	278	140,489	9,081		10,157	1,571	136		3,458
French West Indies.....	11,088	18,324	2,973	517	49	68,744	5,073		1,809	541	52	37	1,595
Bermuda.....	51,951	6,000	1,001	10,060	1,272	105,845	7,636	7,975	24,865	1,802	170	24	8,908
South America:													
Chile.....	1,001,591	8,881,271	695,134	1,203,779	87,530	2,146,212	148,824	4,440	7,826	5,915	519	31,577	26,241
Colombia.....	980,984	2,181,845	139,046	418,936	26,081	14,141,618	712,810	3,074	28,392	37,291	2,611	39,055	29,316
Brazil.....	413,184	215,005	60,154	114,943	13,091	1,569,588	116,317		83,431	130,954	9,741	5,514	134,936
Argentina.....	361,421	1,134,400	149,895	23,680	3,075	175,692	12,456		42,837	53,309	4,468	96,718	54,972
Venezuela.....	440,254	2,342,037	105,472	131,785	11,849	2,821,305	201,808	1,406	5,495	27,891	2,297	43	31,184
Gulfana.....	72,819	163,616	13,492	9,557	977	707,612	44,374	2,765	4,920	1,486	75		6,216
Uruguay.....	126,997	594,411	76,148	4,000	292	172,564	10,387	6,608	11,643			1,978	10,881
Peru.....	176,323	851,802	54,894	111,212	9,618	991,432	71,830	4,948	18,497	1,000	90		16,446
Ecuador.....	162,968	476,627	33,308	217,034	12,708	1,291,843	83,550	141	12,040	18,274	1,324	2,331	11,676
Bolivia.....	284,565	2,013,384	178,702	554,618	37,742	816,420	57,118		7,041				3,962
Paraguay.....	2,628	9,852	1,520			4,199	420						688
Asia and Oceania:													
China.....	5,412,849	78,332,455	5,140,455	1,570,050	90,918	869,037	57,961	78,337	14,088			1,180	23,910
Aden.....	1,067,382	18,046,850	1,067,382										
British India.....	715,174	5,531,179	447,616	876,609	74,565	2,277,000	179,522	95	3,672				0,704
Japan.....	136,973	31,174	3,890	108,189	14,293	271,503	15,391	3,882	7,975	100	10	3,952	66,610
Hongkong.....	383,309	284,506	45,435	10,787	3,247	98,274	13,138	83,430	14,718			210,090	13,251
British Australasia.....	1,773,201	4,180,410	370,335	935,610	92,644	4,923,453	565,079	82,458	509,331	4,615	407	4,038	148,909
Philippine Islands.....	4,305,518	4,078,920	306,697	8,882,013	696,930	32,252,951	2,407,537	48,434	387,848	141,089	13,969	6,110	444,993
All other Asia and Oceania.....	162,673	429,689	43,798	42,163	7,288	835,851	62,024	1,236	27,429	5,350	576	194	20,123
Africa:													
British East Africa.....	508,659	8,546,050	484,613	300,550	21,416	27,117	2,020		154				456
British South Africa.....	312,710	92,573	24,893	1,045	146	111,819	13,151	22,949	215,421	650	49		36,101
All other Africa.....	144,832	1,639,051	113,703	17,631	1,333	70,898	7,139	4,282	11,368				7,007

# SUPPLY AND DISTRIBUTION OF COTTON, 1911.

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The value of cotton goods of domestic manufacture exported during the fiscal year 1911 amounted to \$40,851,918. More than one-half of this amount is accounted for by the exports of cotton cloth, which amounted to 346,590,169 square yards, valued at \$24,387,099. Unbleached cloths amounted to 165,417,652 square yards, valued at \$11,798,194. Nearly one-half of this unbleached cloth was sent to China, the other countries in the order of quantity taken being Aden, Chile, British East Africa, British India, Philippine Islands, and Turkey. More than \$10,000,000 worth of dyed, colored, and printed cloths were exported during the year. The most

important customer for these was the Philippine Islands, but large quantities were also sent to the West Indies, Central and South America, and Canada. Of the other cotton goods exported, Canada was the largest customer, taking very large proportions of the clothing and other wearing apparel, and of "all other manufactures of cotton." The United Kingdom and Germany took large quantities of waste, and nearly two-thirds of the total exports of yarn went to Canada and Hongkong.

The imports of cotton manufactures into the United States for the year ending June 30, 1911, by countries from which imported, are shown in Table 15.

TABLE 15.—IMPORTS OF COTTON MANUFACTURES, BY COUNTRIES FROM WHICH IMPORTED, FOR THE YEAR ENDING JUNE 30, 1911.

(Compiled by the Bureau of Statistics, Department of Commerce and Labor.)

COUNTRY.	Total value.	CLOTHS.						Clothing, ready-made, and other wearing apparel.		Laces, edgings, embroideries, etc. (value).	Thread and yarn (value).	All other manufactures of cotton (value).
		Dyed, colored, stained, etc.		Bleached.		Unbleached.						
		Square yards.	Value.	Square yards.	Value.	Square yards.	Value.	Knit goods (value).	All other clothing (value).			
Total.....	\$64,056,473	37,735,078	\$6,140,423	13,044,502	\$2,184,093	4,155,520	\$469,888	\$4,176,515	\$3,983,030	\$35,924,612	\$4,218,214	\$6,953,098
Europe:												
United Kingdom.....	19,747,808	31,639,800	4,949,521	9,098,102	1,325,003	3,786,033	417,928	76,181	322,123	5,573,376	3,572,804	3,510,032
Germany.....	15,630,422	2,025,211	359,797	237,922	47,777	85,046	16,465	3,735,343	2,045,877	7,844,023	367,526	1,772,014
France.....	11,189,892	1,857,071	490,340	2,308,293	508,036	28,139	5,036	139,405	1,405,915	7,838,135	19,173	783,252
Switzerland.....	14,988,217	380,291	69,846	1,581,484	284,479	239,573	27,992	191,525	16,459	13,796,426	230,092	371,518
Belgium.....	484,744	140,492	21,617	466	43	3,368	399	344	24,937	323,484	6,081	108,839
Austria-Hungary.....	604,556	197,644	38,087	41,793	9,424	7,592	1,517	466	32,107	284,385	.....	238,670
Italy.....	199,036	58,417	7,736	20	2	373	123	66	17,989	132,641	.....	40,479
Spain.....	109,438	318,120	67,518	3,271	1,223	.....	.....	5,069	20,651	12,079	.....	2,948
Netherlands.....	20,491	5,343	1,086	140	53	33	5	19	5,873	9,849	6	2,090
Turkey, including Asiatic Turkey.....	271,834	985	172	.....	.....	266	33	12	6,530	248,864	.....	16,214
All other Europe.....	77,085	1,178	291	709	189	.....	.....	25,072	1,707	42,305	34	6,487
America:												
Canada.....	40,788	9,464	1,415	86	22	1,730	83	81	6,771	6,045	23,388	8,083
Mexico.....	42,716	14,402	1,691	60	12	.....	.....	1,622	7,544	25,480	.....	6,358
All other America.....	15,788	47	9	15	3	42	5	44	3,694	9,368	20	2,645
Asia:												
Japan.....	490,177	1,082,654	136,306	71,049	6,687	2,093	258	216	46,928	225,447	180	74,155
China.....	31,641	3,739	842	288	58	363	22	48	13,802	11,978	.....	5,801
British India.....	28,255	36	18	.....	.....	200	52	.....	236	20,585	.....	1,364
All other countries.....	18,485	94	31	864	182	.....	.....	2	3,878	13,533	.....	859

The total value of imports of cotton manufactures into the United States for the year ending June 30, 1911, amounted to \$64,056,473, the largest part being accounted for by laces, edgings, embroideries, and the like, valued at \$35,924,612. Switzerland is the largest contributor of this kind of goods, followed by France, Germany, and the United Kingdom in the order named. During the year thread to the value of

\$4,218,214 was imported, nearly all of which came from the United Kingdom. The imports of knit goods amounted to \$4,176,515, practically the entire amount coming from Germany.

The value of the export and the import trade in cotton manufactures with the leading countries is shown in Table 16 for 1900 and from 1903 to 1911.

## SUPPLY AND DISTRIBUTION OF COTTON, 1911.

TABLE 16.—VALUE OF EXPORTS AND IMPORTS OF COTTON MANUFACTURES, BY COUNTRIES TO WHICH EXPORTED AND FROM WHICH IMPORTED, FOR THE YEAR ENDING JUNE 30: 1900 AND 1903 TO 1911.

[Compiled by the Bureau of Statistics, Department of Commerce and Labor.]

COUNTRY.	1911	1910	1909	1908	1907	1906	1905	1904	1903	1900
<b>Exports.</b>										
Total.....	\$40,851,918	\$33,398,672	\$31,878,566	\$25,177,753	\$32,305,412	\$52,944,033	\$49,066,080	\$22,403,713	\$32,216,304	\$24,003,087
<b>Europe:</b>										
United Kingdom.....	3,511,090	2,857,625	2,092,212	2,487,349	2,274,014	2,042,377	1,446,409	1,352,212	1,209,346	1,256,729
Germany.....	927,160	806,351	1,035,235	1,140,332	1,185,492	971,647	601,541	1,074,273	1,106,832	885,583
All other Europe.....	1,055,002	979,590	738,992	972,741	965,549	654,353	383,092	330,574	322,508	270,229
<b>America:</b>										
Canada.....	6,474,722	5,242,511	3,712,506	3,270,519	3,507,440	3,587,567	3,030,341	3,130,508	3,045,125	2,691,002
Mexico.....	797,617	772,127	646,488	800,244	934,910	821,302	880,074	732,350	697,742	958,889
Central America.....	3,417,774	2,511,625	2,456,345	2,363,424	2,630,591	2,260,618	2,052,298	1,741,714	1,281,075	1,176,142
British West Indies (including Bermuda).....	957,547	819,124	950,870	687,311	835,047	713,885	659,382	480,027	763,620	435,949
Cuba.....	2,235,850	1,644,498	1,906,964	1,585,370	1,608,653	1,507,473	1,330,260	684,212	416,970	612,252
Haiti.....	1,510,425	1,220,290	1,258,197	742,978	617,659	822,815	524,800	484,060	572,077	745,663
Other North America.....	999,611	762,347	579,181	577,516	828,737	452,468	650,342	557,809	582,000	560,290
Brazil.....	413,184	388,760	265,177	373,545	548,307	636,374	823,129	755,800	686,640	430,118
Chile.....	1,001,591	666,133	490,016	616,814	989,059	898,155	704,408	694,594	613,835	531,131
Colombia.....	980,984	892,886	823,216	624,587	874,813	693,021	896,143	943,487	1,484,261	310,360
Peru.....	176,323	158,476	104,760	132,409	155,792	112,797	157,202	162,785	124,411	113,332
Venezuela.....	449,254	289,797	346,443	319,937	439,100	429,045	438,084	547,080	499,003	332,294
Other South America.....	1,011,398	963,874	1,005,291	692,939	843,830	902,084	1,105,447	564,586	598,481	355,550
<b>Asia and Oceania:</b>										
China.....	5,412,849	5,847,392	8,067,472	3,413,248	5,955,331	29,814,075	28,017,190	4,139,000	13,719,413	8,804,773
British East Indies.....	715,174	732,184	700,677	296,807	654,990	655,349	486,843	453,721	720,826	524,419
British Australasia.....	1,773,201	962,164	979,440	1,039,426	1,229,627	1,285,085	1,079,179	807,269	848,575	622,228
Aden.....	1,067,382	464,413	1,312,265	958,736	1,995,713	1,634,134	1,140,875	1,435,764	1,634,620	(1)
Philippine Islands.....	4,305,618	2,936,398	1,050,042	830,845	1,640,874	403,896	550,244	322,259	316,570	(1)
Other Asia and Oceania.....	681,955	690,710	605,024	711,534	813,339	862,092	1,761,726	421,561	358,707	1,838,346
<b>Africa.....</b>										
All other countries.....	966,201	699,407	682,747	415,141	733,419	782,224	586,350	535,073	681,077	455,309
<b>Imports.</b>										
Total.....	54,056,473	66,473,143	62,010,286	68,379,781	73,704,636	63,043,322	48,919,936	40,524,246	52,462,755	41,296,239
<b>Europe:</b>										
United Kingdom.....	19,747,868	20,365,696	19,951,545	22,421,517	22,071,167	19,446,227	15,069,333	16,831,493	18,685,784	17,110,588
Germany.....	15,089,422	16,707,933	14,859,770	18,036,650	18,212,531	16,459,615	14,332,763	14,156,596	14,136,286	8,863,207
France.....	11,189,802	11,820,515	11,959,565	11,660,509	15,309,399	13,038,125	8,701,625	7,996,644	8,529,531	5,623,340
Switzerland.....	14,983,217	15,463,007	13,533,057	14,478,022	15,280,363	12,578,596	9,728,717	9,626,442	10,095,362	8,975,580
Belgium.....	484,744	522,323	558,874	635,846	691,576	458,557	354,214	305,001	301,578	321,863
Austria-Hungary.....	604,556	650,844	490,658	280,236	203,905	218,974	113,833	152,655	157,771	107,128
Italy.....	190,036	125,601	66,399	182,792	237,965	67,520	41,281	58,922	57,400	10,093
Spain.....	109,438	57,065	49,027	84,311	62,252	80,052	57,400	57,753	54,899	2,747
Netherlands.....	20,481	73,104	47,745	17,333	85,325	60,116	48,880	20,223	27,690	11,417
Turkey (including Asiatic Turkey).....	271,834	156,228	90,564	80,552	69,637	43,725	42,706	48,033	67,724	68,355
All other Europe.....	77,085	42,545	33,192	41,678	65,704	72,600	84,072	39,112	92,815	8,217
<b>America:</b>										
Canada.....	46,788	21,470	10,877	20,912	48,496	10,467	19,429	11,485	8,782	6,527
Mexico.....	42,710	29,765	23,414	28,787	40,720	39,110	44,154	52,062	44,024	33,328
All other America.....	15,788	10,441	4,778	4,347	4,906	2,074	2,465	10,302	1,774	1,460
<b>Asia:</b>										
Japan.....	490,177	202,951	236,062	305,270	333,881	316,278	202,736	181,286	143,234	71,006
China.....	31,641	16,306	11,180	20,028	21,853	14,657	24,109	24,603	14,603	25,073
British India.....	28,255	44,780	21,984	44,036	43,311	67,872	50,441	23,375	27,626	47,742
All other countries.....	18,485	61,880	61,492	9,385	25,525	31,917	30,179	22,063	15,752	8,418

<sup>1</sup> Included in "other Asia and Oceania."<sup>2</sup> Includes exports to Japan, valued at \$393,628.<sup>3</sup> Includes exports to Japan, valued at \$1,430,710.<sup>4</sup> Includes value of exports to Hawaii.

Wide fluctuations appear in the total value of cotton goods exported from the United States, the largest amounts being reported for the years 1905 and 1906, when exports of cotton cloth to China were very heavy. The exports of cotton manufactures to China in 1906 were valued at \$29,814,075 and in 1905 at \$28,017,190, whereas the average for the last 12 years is \$11,192,166. This shows the amounts for the two years named were extraordinarily large and resulted in a decided overstocking of the Chinese market with American cotton goods. The trade with China has never fully recovered from this oversupply and has also had to contend with the increased production of the Japanese mills and with financial and political disturbances. Examined in connection with the value of manufactures the values of exports indicate the extent to which the manufacturers of cotton goods in the United States are con-

fining their activities to the home market. The value of the cotton goods manufactured in the country in 1909, as returned at the census of 1910, not including hosiery and knit goods, the manufacture of which has largely become a branch of the cotton industry, amounted to more than \$625,000,000, while the exports for the fiscal year 1909 amounted to \$31,878,566, or about 5 per cent of the total manufactured. The values of imports of cotton goods show less variation from year to year. The United Kingdom contributes most largely to the imports, and Germany, Switzerland, and France follow in the order named.

*Production, consumption, exports, and imports of cotton.*—Table 17 shows the production, average net weight of bale, value of lint per pound, consumption, domestic exports, and net imports of raw cotton from 1790 to 1910.

## SUPPLY AND DISTRIBUTION OF COTTON, 1911.

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TABLE 17.—ANNUAL PRODUCTION, CONSUMPTION, EXPORTS, AND NET IMPORTS OF RAW COTTON, FOR THE UNITED STATES: 1790 TO 1910.

*Production.*—The production statistics relate, when possible, to the year of growth, but when figures for the growth year are wanting, those for a commercial crop which represents the trade movement have been taken. The statistics of production for the years 1790 to 1898, inclusive, have been compiled from publications of the United States Department of Agriculture; for the years 1899 to 1910, inclusive, and for other dates, when available, census figures are used.

*Value of lint.*—From 1902 to 1910, inclusive, the value of lint per pound relates to upland cotton of the average grade marketed prior to April 1 of the following year; from 1890 to 1901 inclusive, it is the average price of middling cotton on the New Orleans Cotton Exchange; and from 1790 to 1889, inclusive, it is taken from reports of the United States Department of Agriculture.

*Consumption.*—The statistics of consumption for the years 1790 to 1894, inclusive, have been compiled from publications of the United States Department of Agriculture, and those for the years 1895 to 1903, inclusive, from the reports of Latham, Alexander & Co. Census figures are used for the years 1904 to 1910, inclusive, and for other dates when available. The statistics relate to the 12 months during which the crop of the specified year was chiefly marketed, and not to the calendar year specified.

*Domestic exports and net imports.*—For the years 1790 to 1819, inclusive, these statistics have been compiled from American state papers, and for the years 1820 to 1910, from Commerce and Navigation of the United States, published by the Bureau of Statistics, Department of Commerce and Labor. For the years 1790 to 1842, inclusive, the statistics of exports relate to the 12 months beginning with October 1 of the specified year; for 1843 to 1896, inclusive, to the 12 months beginning with July 1; and for 1897 to 1910, inclusive, to the 12 months beginning with September 1. The statistics of imports relate to the same period as the statistics of consumption.

YEAR.	PRODUCTION.				Consumption (equivalent 500-pound bales).	Exports of domestic cotton (equivalent 500-pound bales).	Net imports (equivalent 500-pound bales).	YEAR.	PRODUCTION.				Consumption (equivalent 500-pound bales).	Exports of domestic cotton (equivalent 500-pound bales).	Net imports (equivalent 500-pound bales).
	Running bales, counting round as half bales (number).	Equivalent 500-pound bales, gross weight (number).	Average net weight of bale (lbs.).	Value of lint per pound, upland cotton (cents).					Running bales, counting round as half bales (number).	Equivalent 500-pound bales, gross weight (number).	Average net weight of bale (lbs.).	Value of lint per pound, upland cotton (cents).			
1010.....	11,965,062	12,005,688	480	14.7	4,516,779	8,008,195	231,191	1840.....	2,469,093	1,975,274	429	12.3	575,506	1,270,763	485
1000.....	10,380,209	10,315,382	475	14.3	4,559,002	6,491,843	151,395	1849.....	2,866,038	2,615,031	436	7.5	586,032	2,053,204	23
1908.....	13,432,131	13,587,306	484	9.2	5,198,963	8,880,724	165,451	1840.....	2,430,785	2,128,433	417	8.0	537,427	1,628,549	558
1907.....	11,325,882	11,375,401	480	11.5	4,493,028	7,779,508	140,869	1841.....	1,778,651	1,603,763	431	11.2	385,916	1,054,440	122
1906.....	13,305,265	13,595,493	490	10.0	4,974,190	8,825,236	202,733	1845.....	2,100,537	1,806,110	411	7.9	363,365	1,096,116	886
1905.....	10,725,002	10,804,556	482	10.9	4,877,465	6,975,404	133,464	1844.....	2,394,503	2,078,910	415	5.6	837,730	1,745,812	680
1904.....	13,697,310	13,679,054	478	8.7	4,523,208	9,057,397	130,182	1849.....	1,750,060	1,592,872	412	7.7	298,872	1,327,267	517
1903.....	10,015,721	10,045,615	480	12.2	3,930,567	6,233,682	100,298	1842.....	2,378,875	2,035,481	409	7.2	278,196	1,584,594	1,835
1902.....	10,784,473	10,827,163	481	8.2	4,187,076	6,913,506	149,113	1841.....	1,683,574	1,898,282	397	7.8	222,461	1,169,434	1,07
1901.....	9,748,546	9,675,771	489	8.1	4,080,287	6,870,313	190,080	1840.....	1,634,954	1,347,640	394	9.5	245,045	1,060,408	1,210
1900.....	10,246,002	10,266,522	480	9.3	3,603,516	6,806,572	110,610	1839.....	2,063,915	1,653,722	383	8.9	236,625	1,487,882	297
1899.....	9,507,780	9,459,935	476	7.6	3,687,253	5,167,023	134,778	1838.....	1,860,532	1,692,980	384	13.4	221,738	827,243	319
1898.....	11,180,205	11,436,368	489	4.9	3,072,097	7,626,525	103,223	1837.....	1,801,497	1,428,384	379	10.1	195,100	1,191,905	355
1897.....	10,897,857	10,935,040	482	5.6	3,472,398	7,811,031	105,802	1836.....	1,423,930	1,120,016	379	13.2	176,449	888,423	2107
1896.....	8,532,705	8,515,640	477	7.3	2,841,394	6,124,026	114,712	1835.....	1,360,725	1,061,821	373	16.5	184,731	847,263	427
1895.....	7,161,094	7,146,772	477	8.2	2,499,731	4,761,055	112,001	1834.....	1,253,400	962,343	367	17.4	166,523	774,718	1,574
1894.....	9,901,251	10,025,534	484	5.9	2,983,665	6,961,372	99,399	1833.....	1,225,895	930,062	363	12.9	149,159	709,436	308
1893.....	7,403,000	7,433,056	474	7.5	2,300,276	5,307,295	60,405	1832.....	1,114,296	815,000	350	12.3	142,352	649,397	69
1892.....	6,700,365	6,665,213	475	8.4	2,415,875	4,485,251	85,735	1831.....	1,069,444	805,430	360	9.4	130,895	644,430	22
1891.....	9,035,797	9,940,867	473	7.3	2,846,753	5,896,890	64,394	1830.....	1,020,393	782,218	341	9.7	129,938	553,960	22
1890.....	8,652,597	8,662,089	473	8.6	2,604,491	5,850,219	45,580	1829.....	1,076,609	763,598	339	10.0	89,723	506,918	378
1889.....	7,472,511	7,472,511	478	11.5	2,518,409	4,928,021	18,334	1828.....	953,676	679,916	341	9.9	84,788	520,674	40
1888.....	6,938,290	6,923,775	477	10.7	2,300,250	4,730,192	15,284	1827.....	805,970	564,854	335	10.3	84,510	421,181	697
1887.....	7,046,833	6,884,667	467	10.3	2,205,302	4,519,254	11,983	1826.....	1,057,402	732,213	331	9.3	103,535	588,620	74
1886.....	6,505,897	6,314,561	464	10.3	2,049,687	4,301,542	7,552	1825.....	817,308	633,473	312	12.2	.....	409,071	79
1885.....	6,575,091	6,369,341	463	9.4	2,094,682	4,200,651	8,270	1824.....	751,748	440,791	286	18.6	.....	362,900	20
1884.....	5,082,000	5,477,448	460	10.5	1,687,108	3,783,319	7,144	1823.....	650,028	387,020	282	14.7	.....	286,739	932
1883.....	5,713,200	5,521,063	462	10.6	1,813,805	3,733,369	11,247	1822.....	704,698	439,331	298	11.4	.....	347,447	110
1882.....	6,940,760	6,833,442	470	10.6	2,038,400	4,501,331	4,716	1821.....	630,042	376,509	288	14.3	.....	289,350	2190
1881.....	5,450,048	5,136,447	450	12.2	1,849,457	3,376,521	3,261	1820.....	575,540	334,723	278	14.8	.....	100,000	427
1880.....	6,065,750	6,356,998	460	11.3	1,865,922	4,453,495	5,447	1819.....	632,576	349,372	264	17.0	.....	255,720	4,571
1879.....	5,755,359	5,466,387	454	12.0	1,500,688	3,742,752	7,578	1818.....	446,429	261,505	280	24.0	.....	175,904	4,454
1878.....	5,074,155	4,745,078	447	10.8	1,457,266	3,290,167	5,049	1817.....	405,960	271,967	279	34.0	.....	184,942	3,080
1877.....	4,773,865	4,494,222	450	11.3	1,458,667	3,197,439	5,046	1816.....	439,716	259,414	282	26.0	.....	171,299	2,048
1876.....	4,474,069	4,118,390	440	11.7	1,314,489	2,839,413	4,832	1815.....	369,004	209,205	271	29.0	.....	163,894	44
1875.....	4,632,313	4,302,818	444	13.0	1,255,712	3,037,650	4,498	1814.....	254,546	146,444	275	21.0	.....	51,778	266
1874.....	3,832,991	3,528,276	440	15.0	1,098,163	2,504,118	3,784	1813.....	304,378	166,904	246	15.5	.....	85,453	101
1873.....	4,170,333	3,873,750	444	17.0	1,213,052	2,682,631	3,541	1812.....	304,878	156,904	246	12.5	.....	33,220	3,133
1872.....	3,930,508	3,650,932	444	18.2	1,115,691	2,470,590	10,010	1811.....	325,203	167,364	246	10.5	.....	57,775	597
1871.....	2,974,351	2,756,564	443	20.6	1,146,780	1,824,937	6,374	1810.....	280,195	177,824	297	15.5	.....	35,565	431
1870.....	4,352,317	4,024,627	442	17.0	1,026,583	2,922,757	1,802	1809.....	328,000	171,548	250	16.0	.....	33,473	560
1869.....	3,011,996	2,409,597	440	24.0	706,616	1,987,708	3,026	1808.....	334,821	166,904	224	16.0	.....	101,931	1,601
1868.....	2,366,467	2,198,141	444	20.0	860,481	1,300,449	1,870	1807.....	289,855	167,364	276	19.0	.....	21,261	6,297
1867.....	2,519,554	2,345,610	445	24.9	844,044	1,502,756	1,345	1806.....	285,714	167,364	280	21.5	.....	127,880	1,485
1866.....	2,097,254	1,948,077	444	31.6	715,258	1,401,697	1,035	1805.....	304,348	146,444	230	22.0	.....	71,315	961
1865.....	2,269,316	2,098,658	441	43.2	614,540	1,301,146	10,322	1804.....	261,044	135,983	249	23.0	.....	76,780	456
1864.....	300,000	299,372	477	83.4	344,278	17,789	68,798	1803.....	222,222	125,523	270	20.0	.....	70,068	183
1863.....	450,000	449,059	477	101.5	219,540	23,998	52,405	1802.....	210,692	115,063	238	19.0	.....	75,424	1,153
1862.....	1,000,000	1,566,653	477	67.2	287,307	22,770	67,695	1801.....	231,026	100,418	228	19.0	.....	47,763	1,170
1861.....	4,500,000	4,490,586	477	31.3	369,226	10,129	61,731	1800.....	153,509	73,222	228	44.0	.....	41,822	8,606
1860.....	3,849,469	3,841,416	477	13.0	841,975	615,032	.....	1799.....	88,880	41,841	225	28.0	.....	16,737	8,870
1859.....	5,387,052	4,309,642	461	11.0	845,410	3,535,373	.....	1798.....	66,067	31,381	225	44.0	.....	10,005	7,532
1858.....	4,018,914	3,753,273	447	12.1	867,489	2,772,937	.....	1797.....	48,899	23,013	225	39.0	.....	18,720	7,761
1857.....	3,267,339	3,012,106	442	12.2	550,708	2,237,243	.....	1796.....	44,444	20,621	225	34.0	.....	7,577	7,399
1856.....	3,093,737	2,873,080	444	13.5	701,614	2,096,505	1,678	1795.....	35,556	16,736	225	36.5	.....	12,213	8,737
1855.....	3,665,557	3,220,782	420	10.3	731,484	2,702,803	2,205	1794.....	35,556	16,736	225	36.5	.....	9,414	8,592
1854.....	2,982,634	2,708,082	434	10.4	641,391	2,010,840	4,425	1793.....	22,222	10,490	225	33.0	.....	3,565	5,127
1853.....	3,074,970	2,766,194	430	11.0	663,204	1,975,066	1,141	1792.....	13,333	6,276	225	32.0	.....	1,097	5,503
1852.....	3,416,214	3,130,338	438	11.0	730,408	2,233,141	1,423	1791.....	8,889	4,184	225	29.0	.....	277	1,112
1851.....	8,126,310	7,790,290	428	9.5	617,468	2,186,461	512	1790.....	6,667	3,138	225	26.0	.....	11,000	379
1850.....	2,454,442	2,136,083	416	12.1	422,026	1,854,474	890								

1 Equivalent 400-pound bales.

2 Excess of foreign exports over total imports.

# WORLD'S CONSUMPTION OF COTTON, AND TRADE IN COTTON AND ITS MANUFACTURES, FOR SELECTED COUNTRIES.

The statistics of the number of active cotton spindles and of the mill consumption of cotton throughout the world in 1911 and 1900 are shown in the following table:

TABLE 18.—*World's active cotton spindles and mill consumption of raw cotton: 1911 and 1900.*

[The statistics for the United States were collected by the Bureau of the Census. Those for other countries have been compiled from a number of sources. Among them are Ellison's Annual Review of the Cotton Trade, Liverpool; the Commercial and Financial Chronicle, New York; Cotton Facts, New York; reports of the International Federation of Master Cotton Spinners' and Manufacturers' Associations, Manchester; and statistics furnished by Mitsui & Co., Osaka, and E. T. Craig, Mexico City.]

COUNTRY.	Year.	Active spin- dles.	Mill con- sumption (bales). <sup>1</sup>
Total.....	1911 1900	137,792,000 105,681,000	19,013,000 15,177,000
United States:			
Cotton-growing states.....	1911 1900	11,077,000 4,368,000	2,328,000 1,523,000
All other states.....	1911 1900	18,438,000 15,104,000	2,377,000 2,350,000
Europe:			
United Kingdom.....	1911 1900	54,523,000 45,500,000	3,782,000 3,330,000
Germany.....	1911 1900	10,480,000 8,000,000	1,685,000 1,400,000
Russia.....	1911 1900	8,672,000 7,500,000	1,625,000 1,350,000
France.....	1911 1900	7,300,000 5,590,000	900,000 700,000
Austria-Hungary.....	1911 1900	4,564,000 3,300,000	749,000 675,000
Italy.....	1911 1900	4,252,000 1,940,000	790,000 475,000
Spain.....	1911 1900	1,853,000 2,015,000	315,000 400,000
Switzerland.....	1911 1900	1,481,000 1,550,000	100,000 125,000
Belgium.....	1911 1900	1,327,000 920,000	217,000 170,000
Portugal.....	1911 1900	470,000 230,000	65,000 60,000
Netherlands.....	1911 1900	431,000 300,000	79,000 70,000
Sweden.....	1911 1900	528,000 360,000	95,000 85,000
Denmark.....	1911 1900	80,000 40,000	21,000 15,000
Norway.....	1911 1900	74,000 35,000	11,000 10,000
Other European countries.....	1911 1900	200,000 130,000	60,000 42,000

TABLE 18.—*World's active cotton spindles and mill consumption of raw cotton: 1911 and 1900—Continued.*

COUNTRY.	Year.	Active spin- dles.	Mill con- sumption (bales). <sup>1</sup>
British India.....	1911 1900	6,250,000 4,045,000	1,650,000 1,102,000
Japan.....	1911 1900	2,180,000 1,274,000	1,060,000 700,000
China.....	1911 1900	831,000 550,000	350,000 200,000
Brazil.....	1911 1900	1,000,000 450,000	370,000 85,000
Canada.....	1911 1900	855,000 550,000	110,000 110,000
Mexico.....	1911 1900	630,000 470,000	140,000 125,000
All other countries.....	1911 1900	200,000 50,000	65,000 15,000

<sup>1</sup> The quantities for the United States are given in running bales, except that round bales are counted as half bales and foreign cotton has been reduced to equivalent 500-pound bales. Linters are included. For other countries the quantities are given in equivalent 500-pound bales.

The statistics of Table 18 have been compiled from a number of sources, and, while absolute accuracy is not claimed for all the figures, they approximate the facts. The number of active cotton spindles in the world, as shown in the table, was 105,681,000 in 1900 and 137,792,000 in 1911, the increase during the 11 years being 32,111,000 spindles, or 30 per cent. In addition to the spindles reported above for 1911, there were 1,281,000 spindles in the United States that were inactive during the year. While no definite information as to the number in other countries is available, it is believed that the total number of inactive spindles in the world will approximate 3,000,000, thus making the total number of spinning spindles at the close of the year not far from 141,000,000. The world's consumption of cotton for the year ending August 31, 1911, has been placed at 19,013,000 bales, as compared with 18,321,000 bales in 1910 and 19,397,000 bales in 1909. The statistics, however, do not include the total consumption of cotton, for in a number of countries large quantities are grown and consumed which do not enter into commercial channels and can not be estimated with any cer-

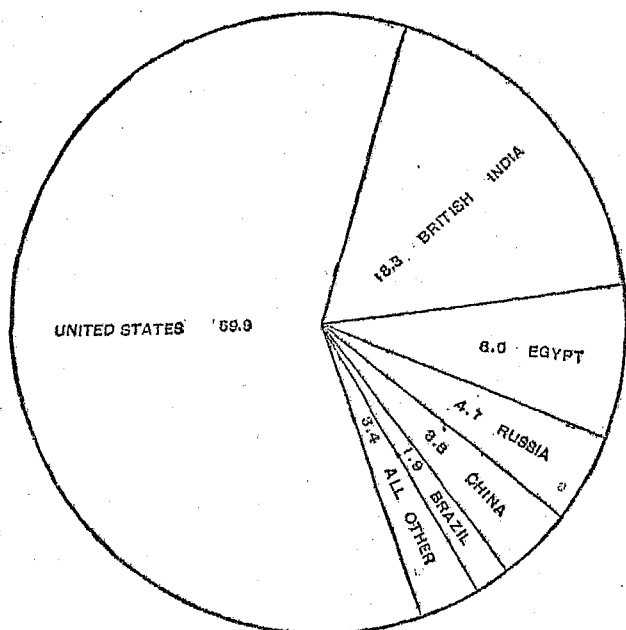
tainty. The variation in the world's consumption of cotton for the different years follows the course of the variation in the annual production in the United States, which contributes about two-thirds of the total commercial supply. With the exception of the figures for the United States, the statistics for consumption of cotton are given in equivalent 500-pound bales. It is impracticable to reduce the consumption figures to net-weight bales, as it is not known how much foreign-grown cotton reported for countries other than the United States is expressed in net-weight bales and how much in gross-weight bales. Assuming that the consumption statistics for foreign countries have been returned in net-weight bales, the world's factory consumption is estimated at 18,825,000 bales of 500 pounds net. The world's commercial production of cotton from the crop of 1910 amounted to 19,171,000 bales of 500 pounds net. This, however, includes the total production for British India, whereas part of the cotton consumed in that country, namely, that in the household manufacture, which is not included in the foregoing figures for mill consumption, is

estimated at 650,000 bales. On this basis the production of commercial cotton from the crop of 1910 was less by 300,000 bales than the quantity consumed during the year ending August 31, 1911. The world's consumption of cotton during the year ending August 31, 1909, when the mills operated more nearly to their capacity, amounted to 19,397,000 bales, and considering the increase in the total number of spindles since that time, the potential consumption of the mills of the world at the present time is estimated to be not far from 21,000,000 bales. As the stocks of cotton on hand September 1 are materially below what would be considered necessary under normal conditions, the growth of 1911 must be depended on to furnish the mill requirements for the coming year and for any increase in stocks. It thus appears probable that as much as 14,500,000 bales of American cotton can, under normal conditions, be absorbed during the year ending August 31, 1912.

The relative importance of the several countries in the production and consumption of cotton is shown in the following diagram:

DIAGRAM 3.—RELATIVE IMPORTANCE OF THE SEVERAL COUNTRIES IN THE PRODUCTION AND CONSUMPTION OF COTTON.

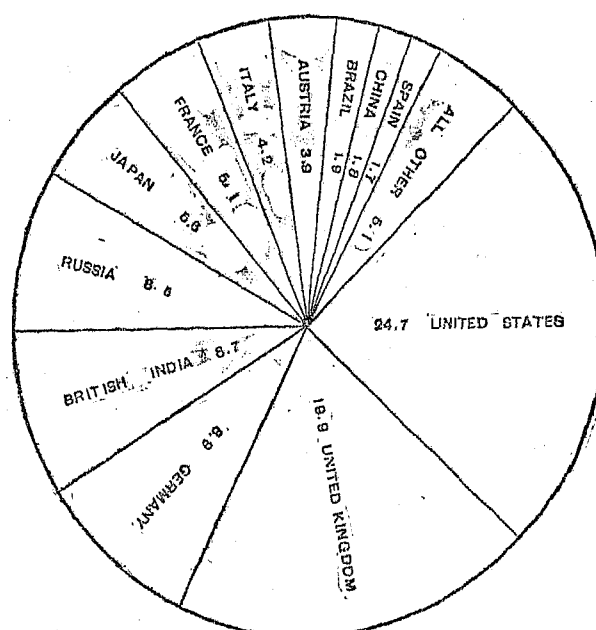
*Proportion of world's mill supply of cotton contributed by each country (growth of 1910).*



UNITED STATES.

The year 1911 was not a prosperous one for the American mills, the quantity of cotton consumed being over half a million bales less than in 1909, notwithstanding the increase in the spindle capacity. Many mills materially curtailed operations, while the number of spindles idle throughout the year was much larger than for years past. The high price of raw cotton, together with the tendency on the part of dealers to reduce stocks of cotton goods, are given as causes for

*Proportion of total consumption, by countries (year ending August 31, 1911).*



the continued depression of the industry during the year. A belief that the supply of raw material would be insufficient for the year's requirements led to an early and active demand both at home and abroad, and a high price for cotton was maintained throughout the year. In recent years the prices of practically all commodities have advanced materially, and, in the case of cotton, a constantly broadening demand in old as well as new channels has furthered this advance. Cotton is now relied upon in practically all the

textile industries, either as a primary or as a secondary material, and it is utilized in an increasing number of other manufacturing industries. A detailed presentation of cotton spindles and cotton consumption for the United States appears in earlier pages of this report.

#### EUROPE.

For the year covered by this report, the cotton trade in Europe has been, on the whole, unprofitable and unsatisfactory. The high price of the staple, due in large measure to the shortage in the supply, resulted in short time, in the factories of practically every country of continental Europe, with the possible exception of Russia. The mills of that country secured the raw material for their needs largely from the central Asiatic provinces. The crop of Egypt, which was the largest ever grown, helped the English manufacturers, but, owing to their general production of the coarser counts of yarn, it did not benefit the continental mills greatly. A good export demand for the products of the British mills existed throughout the year, although not for the products of those on the continent. Strikes and other labor difficulties, consequent loss of wages, and a partial failure in the crops, curtailed the general purchasing power and affected the cotton manufacture and trade as well as all other channels of business.

#### UNITED KINGDOM.

As indicated in Table 18, there were 54,523,000 active spindles in the United Kingdom in 1911, compared with 45,500,000 in 1900, the increase being 20 per cent. The quantity of cotton consumed in the United Kingdom increased from 3,330,000 bales in 1900 to 3,782,000 in 1911, or 14 per cent. The spindles operated in the United Kingdom during the past year were 40 per cent of all the active mill spindles in the world, but the quantity of cotton consumed by them was only 20 per cent of the total. Neither the percentage of spindles nor that of cotton consumed conveys a proper idea of the place the country holds in the cotton-manufacturing industry of the world, for the goods made are on the average of a much finer grade and higher value than those produced elsewhere.

While the condition of the cotton industry in the United Kingdom has not been entirely satisfactory during the past year, both production and trade have been in a far better condition than on the Continent or in America. One of the chief reasons for this is that the high price of raw material affects less seriously the manufacture of the finer grades of goods than it does the coarser grades. As a result, the mills of the United Kingdom had far more satisfactory returns and a remarkable volume of trade, in view of the almost world-wide depression in the industry. While the manufacturers of fabrics have fared well during the year, the spinners have not been so successful, and at a meeting held by them in March, a proposal was

made to stop all spindles one day each week for 13 weeks. It failed to carry, although over 80 per cent of the spinners favored it, and many have been obliged to run on short time.

#### CONTINENTAL EUROPE.

*Germany.*—In the number of active spindles and the quantity of cotton consumed, Germany ranks first among the countries of continental Europe and third among the countries of the world, being exceeded only by the United States and the United Kingdom. According to Table 18, the number of cotton spindles in Germany increased from 8,000,000 in 1900 to 10,480,000 in 1911, or 31 per cent. The increase in the consumption of cotton in the 11 years was 285,000 bales, or 20 per cent. About two-thirds of the country's supply of cotton is secured from the United States, and most of the remainder from Egypt and India. Raw cotton is the largest single import of Germany and cotton manufactures the largest export. In 1910, according to Table 19, Germany imported 1,881,365 bales of cotton and exported 220,873 bales, thus leaving 1,660,492 bales for consumption. During the year the values of imports and exports of cotton goods were \$44,125,914 and \$103,466,692, respectively, giving to Germany a balance of trade in cotton manufactures of \$59,340,778.

During the past year, cotton manufacturing in Germany, as elsewhere, continued to suffer from the general depression in the industry. To the continued high price of raw material was added a lessened home demand for the manufactured product, primarily due to poor harvests. Some branches of the industry felt the effect of a decreased foreign demand. For instance, the value of the imports into the United States from Germany was over \$1,000,000 less than for the preceding year, the reduction being chiefly in the value of hosiery. Despite the unprofitable condition of the industry, there was no organized arrangement for short time, but many of the mills restricted their production materially during the summer.

*France.*—As indicated in Table 18, there are at present 7,300,000 active spindles in France, compared with 5,500,000 in 1900, an increase of 33 per cent in 11 years. The consumption of cotton during this period increased from 700,000 bales to 960,000 bales, or 37 per cent. About four-sevenths of the spindles in France are mule, and about one-fifth of the total number are employed on Egyptian cotton, the remainder using chiefly American cotton. The condition of the cotton-manufacturing industry has continued unsatisfactory and the mills have been frequently run on short time. In the Normandy district, where over one-seventh of the spindles are located, the mills were stopped one day per week in May and one and one-half days per week during June, July, and August; in the Vosges district, which contains two-sevenths of the spindles, and in the Nord district, which contains about



one-fourth of the spindles, the mills were idle one day per week during three months.

France ranks fourth among the European countries in the manufacture of cotton goods and third in exports. As shown in Table 19, the value of such goods imported into France in 1910 was \$14,764,500, and the value of those exported was \$63,768,744, the balance of trade being \$49,004,244 in favor of France.

*Russia.*—The number of cotton spindles in Russia increased from 7,500,000 in 1900 to 8,672,000 in 1911, or 16 per cent, and the quantity of cotton consumed from 1,350,000 bales in 1900 to 1,625,000 bales in 1911, or 20 per cent. Russia, being less dependent upon the limited and high-priced supply of cotton from foreign countries, was one of the few countries of continental Europe so fortunate as to escape the necessity for curtailment in the operations of the cotton mills during the year. The largest crop of cotton ever grown in the Russian provinces in central Asia, and practically the total exports of Persian cotton, which were greater than ever before, furnished to Russian mills specially equipped for handling them, an abundant supply. As the harvests were good, and as purchases of cotton goods for some time past had been limited, a steady home demand developed, and the cotton-manufacturing industry had a fairly successful, if not a prosperous, year.

*Austria-Hungary.*—The number of active spindles in Austria-Hungary at the present time is reported as 4,564,000, compared with 3,300,000 in 1900, the increase being 38 per cent in 11 years. During the same period the quantity of cotton consumed increased from 675,000 bales to 749,000 bales, or 11 per cent. The industry was seriously affected by the limited supply and high price of the raw material during the past year, and has been working for some time on an organized basis of a 25 per cent reduction in the annual output.

*Italy.*—Probably the most interesting growth in the cotton-manufacturing industry in any of the European countries during the period covered by Table 18 is that in Italy, where the number of active spindles increased from 1,940,000 in 1900 to 4,282,000 in 1911, and the quantity of cotton consumed from 475,000 bales to 790,000 bales. The increase in the number of spindles is disproportionate to the increase in the quantity of cotton consumed, but this may be accounted for in part by the curtailment in the industry during the year and by the greater production of the finer grades of goods. The remarkable development of cotton manufacturing in Italy has been ascribed primarily to the low cost of production, made possible by a large supply of low-priced labor and abundant water power. The present depression in the industry has been intensified by the system of sales on long-term credits unaccompanied by settlements in

negotiable paper, and as a result the cotton-manufacturing industry of Italy is now facing a crisis. Many mills have stopped entirely and others made an average reduction of about 20 per cent in their output during the summer months.

*Belgium.*—The number of active spindles in Belgium in 1911 was approximately 1,327,000, compared with 920,000 in 1900, the increase during the 11 years being 407,000, or 44 per cent. During this period the consumption of cotton increased from 170,000 bales to 217,000 bales, or 28 per cent. Owing to the trade conditions of the past few years, the consumption of cotton has been materially reduced, but the industry in Belgium has not been so disturbed as in most countries of continental Europe, and the first half of the year was fairly prosperous.

*Other European countries.*—In addition to those already named, the manufacture of cotton is an important industry in a number of other European countries, among which may be mentioned the following: Spain, with 1,853,000 active spindles; Switzerland, with 1,481,000; Sweden, with 528,000; Portugal, with 476,000; the Netherlands, with 431,000; Denmark, with 80,000; and Norway, with 74,000. The relative position of some of these countries in the manufacture of cotton and in the trade in cotton goods may be seen in Tables 18 and 19.

#### BRITISH INDIA.

As shown by the statistics of Table 18, the number of active cotton spindles in the mills of British India increased from 4,945,000 in 1900 to 6,250,000 in 1911, and the quantity of cotton consumed from 1,162,000 bales in 1900 to 1,650,000 bales in 1911. In addition to the cotton used in the mills, it is estimated that about 650,000 bales of 500 pounds each are consumed annually in the homes of the people.

Cotton is indigenous to India and that country is regarded as the birthplace of its manufacture. During the year covered by this report India ranked fourth in cotton manufacture, as indicated by the consumption of the raw material, being exceeded by the United States, the United Kingdom, and Germany. The crop of 1910 was somewhat smaller than that of the preceding year, which fact, together with the worldwide shortage in the supply, so restricted manufactures that British India, in common with other countries, had its full share of short-time and of idle spindles.

As shown in Table 19, the exports of cotton in 1910 amounted to 2,012,738 bales, while 21,871 bales were imported. The cotton imported into India is used chiefly for mixing with native cotton and for manufacturing fancy goods. The value of cotton goods exported during the year was \$48,478,362, and the imports of such goods were valued at \$127,782,529.



## JAPAN.

As shown by the statistics of Table 18, the number of spindles in Japan at the present time is 2,180,000, compared with 1,274,000 in 1900, while the quantity of cotton consumed increased from 700,000 bales in 1900 to 1,060,000 bales in 1911. The large consumption of cotton per spindle is due to the fact that the mills are usually operated day and night, and are for the most part equipped with ring spindles, which consume considerably more cotton than mule spindles. At the present time Japan has 38 establishments engaged in the manufacture of cotton, containing 17,000 looms and employing about 93,000 men, women, and children. It is estimated that there are still about 1,000,000 hand looms in Japan, and that they produce one-third of the cotton cloth used by the inhabitants.

Notwithstanding the maintenance of an organized curtailment of 27.5 per cent on coarse yarns and 20 per cent on fine yarns during the year, Japan is one of the very few countries in which the cotton-manufacturing industry has been in a prosperous condition in spite of the high price of raw material. One reason for this may be that subsidized shipping enables the Japanese mills to transport their supplies of cotton at a very low rate. Low freight rates and proximity to China, the great market for Japanese yarns and cloth, influence the exports of the finished products and give Japan an advantage in competition with other countries.

The principal source of the cotton supply is British India, although the importation of Chinese cotton is important and increasing. The imports from the United States for a number of years have averaged about 200,000 bales annually. Efforts are being made to increase the supply by promoting growth in Korea and Siam.

As shown in Table 19, the value of cotton manufactures imported into Japan in 1910 was \$7,245,013, while the exports of such goods were valued at \$38,446,485. Compared with the preceding year, the value of the imports decreased by about \$1,600,000, while the value of the exports increased something over \$9,000,000, an indication of the degree of prosperity enjoyed by the industry.

## CHINA.

The number of cotton spindles in the mills in China has increased from 550,000 in 1900 to 831,000 in 1911, or 51 per cent, and the estimated quantity of cotton consumed from 200,000 bales in 1900 to 350,000 bales in 1911, or 75 per cent. These figures relate only to the consumption of cotton in the mills, and do not include that spun or otherwise used in the homes of the people. The home industry is independent of outside connections and enables the people to protect themselves against unusual conditions in the world markets, for,

when the import price of cotton manufactures rises above that at which China can produce them, their manufacture is taken up by the people in this home industry. It is estimated that China is now supplying about four-fifths of its own annual cotton goods requirements, independent of the factory manufacture.

Home weaving has been much encouraged by a Japanese improvement upon the ancient Chinese foot or hand loom. In the new device springs largely take the place of foot power, the frame work is made lighter, and the loom can be operated with much less effort. Thousands of these improved looms have been sold in China during the past five years.

The mills of China employ about 20,000 people, most of whom are boys and young men. Being devoted chiefly to spinning, the factories contain but 3,600 looms. Around the yarn mills, especially those in Yangtze Valley, weaving mills using hand looms have sprung up employing hundreds of people. Some factories make yarn, sell it to the people, buy the native cloth woven from the yarn, and then distribute the cloth wherever a market can be found.

As shown in Table 19, China ranks second among the countries in the value of cotton manufactures imported. The value of yarn and thread imported amounted in 1910 to \$40,997,539, or nearly one-half of the total for all cotton manufactures imported. The yarns imported are principally of Japanese and English manufacture and are used almost entirely in the manufacture of cloth on hand looms. The quantity of American yarns used is very small. Of the total value of imports of cotton goods, \$85,271,726, the United States furnished about 7 per cent.

## BRAZIL.

The number of cotton spindles in Brazil is estimated at 1,000,000, an increase in the last 11 years of 122 per cent, while the quantity of cotton consumed increased from 85,000 bales in 1900 to 370,000 bales in 1911.

The cotton-manufacturing industry in Brazil was subjected to government repression until protective provisions were enacted in 1846. In 1865 there were but 9 mills in the country. The number increased to 51 in 1885, to 109 in 1905, and to 161 in 1910. The industry is capitalized at over \$70,000,000 and employs about 55,000 operatives. The labor cost is from one-third to one-half greater than in the United States, the cost of cotton delivered at the mill about 3 cents more per pound, and the cost of fuel and power correspondingly higher. The output of the mills is largely coarse goods for the domestic market, for the manufacture of which the Brazilian cotton is best suited. Brazil manufactures about two-thirds of the cotton goods used in that country and imports cotton goods valued at approximately \$15,000,000. Over half of this is the value of cloth, which represents imports from the United Kingdom.

## MEXICO.

The number of spindles operated in the Mexican mills increased from 470,000 in 1900 to 630,000 in 1911, and the consumption of cotton in 1911, amounting to 140,000 bales, exceeded that of 1900 by 15,000 bales. Despite the more favorable condition of a cotton crop which supplied for mill consumption in the year covered by this report 10,000 bales more than the crop of the preceding year, the number of active spindles has decreased.

During the latter part of 1910 a revolution was threatening, which culminated in war in the spring of 1911. The cotton-manufacturing industry, which was not flourishing at the beginning of the year, was affected even more seriously by the unrest and insecurity attendant upon the revolution.

The demand for the product of the Mexican mills, which as a rule produce the coarser grades of cotton cloth used by the peons, decreased greatly as a result of the unsettled political conditions, and importations of finer goods utilized by the more wealthy class likewise declined. Although most of the mills are run by water power, and the Government seeks to encourage manufacturing, the industry is not very prosperous.<sup>1</sup> Cotton costs on an average 3½ cents more per pound than in the United States, coal costs twice as much, and the cost of labor is high in proportion to its efficiency. Were it not for the high tariff on imports of cotton goods it is doubtful if there could be any development of the industry in the country.

## CANADA.

As shown in Table 18, the number of spindles in Canada increased from 550,000 in 1900 to 855,000 in 1911, or 55 per cent, and the quantity of cotton consumed from 110,000 bales in 1900 to 119,000 bales in 1911, or 8 per cent. In addition to raw cotton, Canada imported during the year ending March 31, 1911, about 6,600,000 pounds of cotton waste from the United States and yarn and thread valued at over \$1,000,000. The general condition of the industry was the same as in other countries, and production was considerably curtailed during the summer months. According to Table 19, the value of cotton manufactures imported during the last Canadian fiscal year was \$19,763,590, of which about one-third was supplied by the United States.

## OTHER COUNTRIES.

Among other countries of relatively small, though increasing, importance in the manufacture of cotton goods, Asiatic Turkey, Indo-China, and some of the South American states must be considered in a review of the world's progress in the industry.

## IMPORTS AND EXPORTS OF COTTON AND COTTON MANUFACTURES.

Table 19 shows for the more important countries the trade in cotton and cotton goods for the latest fiscal year for which figures are available.

TABLE 19.—Imports and exports of raw cotton and of cotton manufactures for selected countries.

[Compiled by the Bureau of Statistics, Department of Commerce and Labor. Owing to many differences in the methods employed by the several countries in classifying their imports and exports of cotton manufactures and in presenting statistics for the same, it is very difficult, if not impracticable, to harmonize the results so as to present strictly comparable statistics. The statistics relate to the calendar year, except those for the United States, Cuba, and Mexico, which are for the fiscal year, and those for Canada and British India, which relate to the year ending March 31.]

COUNTRY.	Year.	Raw cotton (equivalent 500-pound bales).	VALUE OF COTTON MANUFACTURES.			
			Total.	Cloth.	Yarn and thread.	All other.
<i>Imports.</i>						
Austria-Hungary...	1909	897,268	Dollars. 12,449,733	Dollars. 1,883,637	Dollars. 7,291,354	Dollars. 3,274,792
Belgium.....	1909	577,364	40,209,711	12,477,752	9,774,000	26,957,959
Bulgaria.....	1909	5,420	5,384,438	2,612,131	2,342,814	429,493
Denmark.....	1907	38,720	7,981,040	5,499,300	1,155,080	1,326,660
France.....	1910	1,404,258	14,764,500	2,470,789	3,621,608	9,272,105
Germany.....	1910	1,881,365	44,125,914	10,626,978	24,232,422	9,306,514
Greece.....	1909	1,546	3,410,746	3,248,820	50,521	111,405
Italy.....	1909	839,006	7,250,334	3,084,271	924,636	2,841,927
Netherlands.....	1909	369,211	27,637,900	9,283,926	10,289,727	2,059,307
Norway.....	1909	16,630	2,085,855	432,578	815,390	2,737,887
Portugal.....	1909	64,643	3,245,069	1,969,108	276,110	999,851
Roumania.....	1909	4,211	6,963,668	2,670,095	3,107,120	1,285,853
Russia.....	1909	811,255	14,174,430	7,216,767	4,336,592	2,621,071
Servia.....	1909	409	2,849,257	1,407,857	1,276,333	165,067
Spain.....	1909	310,617	2,639,957	786,157	391,730	1,462,070
Sweden.....	1909	93,328	4,732,677	2,313,678	1,303,531	1,115,468
Switzerland.....	1909	164,816	16,138,150	7,046,404	5,160,148	3,931,598
United Kingdom.....	1910	3,945,482	52,021,378	13,115,289	1,941,500	37,864,592
Canada.....	1911	136,167	10,763,590	10,525,401	1,009,192	8,225,997
Cuba.....	1909	2,165	7,044,941	6,431,160	312,941	1,200,840
Mexico.....	1910	36,097	5,389,825	2,817,346	1,104,413	1,378,066
United States.....	1911	231,191	64,056,473	8,801,004	4,218,214	51,037,255
Argentina.....	1909	1,303	31,662,515	24,656,139	2,034,149	4,972,227
Brazil.....	1909	2,211	15,032,953	8,669,100	2,553,458	3,810,395
Chile.....	1909	797	12,175,287	6,884,606	1,341,247	4,949,434
Peru.....	1909	.....	2,571,824	2,008,497	168,332	394,995
China.....	1910	54,911	85,271,726	41,642,635	40,997,639	2,631,552
Japan.....	1910	1,275,826	7,245,013	6,718,636	379,255	147,122
Korea.....	1909	882	3,949,294	2,898,379	962,612	68,303
Siam.....	1909	760	4,192,756	1,928,141	505,152	1,769,463
British India.....	1910	21,871	127,782,520	109,984,245	11,738,108	6,060,116
French Indo-China.....	1908	15,487	9,741,124	5,191,533	4,427,540	122,045
Dutch East Indies.....	1909	.....	10,041,261	5,376,749	1,742,185	3,522,327
Philippine Islands.....	1909	1,747	7,094,276	4,796,444	1,041,976	1,255,856
Australia.....	1909	1,929	30,464,672	15,872,915	1,819,200	12,772,557
New Zealand.....	1909	1,210	6,298,924	3,696,919	168,105	2,433,840
Egypt.....	1909	307	16,796,958	15,060,164	1,232,719	504,075
Algeria.....	1909	503	10,623,144	9,253,630	235,922	1,133,592
Tunis.....	1910	.....	2,256,350	1,925,520	134,666	196,164
Other French Africa.....	1908	.....	8,993,652	8,218,811	354,466	420,375
British South Africa.....	1909	.....	10,865,631	7,660,330	(*)	3,205,301
Other British Africa.....	1909	.....	13,392,635	7,817,267	(*)	5,575,368
German Africa.....	1909	.....	3,381,738	2,794,523	76,667	610,548
<i>Exports.</i>						
Austria-Hungary...	1909	50,189	13,257,962	7,477,902	2,174,083	3,605,077
Belgium.....	1909	280,969	54,004,530	14,428,085	9,492,935	30,082,910
France.....	1910	1213,193	63,768,744	29,323,292	2,755,075	31,690,407
Germany.....	1910	220,573	103,466,692	37,974,328	13,035,022	52,457,342
Italy.....	1909	39,671	25,646,333	10,663,045	3,912,236	2,671,052
Netherlands.....	1909	129,054	16,116,466	9,786,029	2,280,063	4,056,374
Russia.....	1909	27,436	10,689,232	10,546,875	142,453	.....
Switzerland.....	1909	62,266	52,967,250	11,608,150	5,582,762	35,776,338
United Kingdom.....	1910	512,202	515,222,235	382,922,685	85,312,684	46,986,866
United States.....	1911	8,667,832	40,851,918	24,387,099	606,557	15,858,262
British India.....	1910	2,012,738	48,473,262	14,034,644	33,359,930	483,788
Japan.....	1910	246	38,446,485	10,190,342	22,633,425	5,622,718

<sup>1</sup> For the year 1909.

<sup>2</sup> For the year 1910.

<sup>3</sup> Included in "all other."

<sup>1</sup> Special Agent Series, No. 31, Bureau of Manufactures, Department of Commerce and Labor.

# WORLD'S PRODUCTION OF THE LEADING TEXTILE FIBERS.

Because of the important position of the United States as a producer of textile materials and the large aggregation of capital in the country employed in the manufacture of textiles, approximately accurate statistics of the supply of the leading textile fibers, dis-

tributed according to countries of production and showing the relative importance of the different fibers, will be of value to those concerned in textile manufacture and trade. Such statistics for the years 1909, 1899, and 1889 are presented in Table 20.

TABLE 20.—WORLD'S PRODUCTION, IN POUNDS, OF THE LEADING TEXTILE FIBERS: 1909, 1899, AND 1889.

The statistics for the United States were collected by the Bureau of the Census, except those for wool, flax, and hemp for 1909. Those statistics, as well as the statistics for foreign countries, have been compiled from a number of sources. Among them are reports of the National Association of Wool Manufacturers, Boston, of the Flax Supply Association, Belfast, of Russian Commerce and Agriculture, St. Petersburg, and of the Silk Association of America, New York; and data furnished by the International Flax Twine Co., Chicago, by the Columbia Rope Co., Auburn, N. Y., and by Ralli Bros., New York. Since it has not been practicable to secure satisfactory data in all instances, only an approximation to the facts is claimed for the statistics not collected by special inquiries.]

COUNTRY.	Growth year.	QUANTITY (POUNDS).					
		Cotton.	Wool.	Silk. <sup>1</sup>	Flax.	Hemp.	Jute.
Total.....	1909	8,505,191,000	2,763,310,000	85,048,000	1,872,127,000	1,453,186,000	2,918,000,000
	1899	7,034,968,000	2,706,200,000	60,812,000	1,142,482,000	1,625,875,000	2,200,000,000
	1889	5,873,856,000	2,419,700,000	40,066,000	1,007,224,000	1,470,248,000	1,860,000,000
United States.....	1909	5,157,691,000	328,000,000		4,000,000	10,100,000	
	1899	4,729,968,000	310,000,000		840,000	11,751,000	
	1889	3,736,256,000	276,000,000		241,000	23,000,000	
Brazil.....	1909	180,000,000	1,130,000				
	1899	160,000,000	1,500,000				
	1889	120,000,000	1,875,000				
Argentina.....	1909		392,419,000				
	1899		370,000,000				
	1889		376,700,000				
United Kingdom.....	1909		133,705,000		26,934,000		
	1899		140,200,000		16,034,000		
	1889		147,500,000		42,139,000		
Russia.....	1909	380,000,000	380,000,000	( <sup>2</sup> )	1,594,000,000	1,021,223,000	
	1899	300,000,000	361,100,000	( <sup>2</sup> )	876,788,000	1,100,000,000	
	1889	166,000,000	291,500,000	( <sup>2</sup> )	705,011,000	1,000,000,000	
France.....	1909		78,000,000	1,486,000	46,340,000	30,875,000	
	1899		103,000,000	1,235,000	27,839,000	47,169,000	
	1889		124,800,000	1,303,000	63,080,000	80,922,000	
Italy.....	1909		21,500,000	9,373,000	44,800,000	150,000,000	
	1899		21,400,000	7,415,000	44,741,000	166,843,000	
	1889		21,400,000	6,350,000	31,730,000	186,458,000	
Austria-Hungary.....	1909		41,600,000	838,000	104,332,000	144,613,000	
	1899		54,300,000	605,000	112,809,000	145,581,000	
	1889		54,300,000	589,000	99,536,000	143,868,000	
Turkey.....	1909	16,000,000	135,500,000	( <sup>2</sup> )			
	1899	25,000,000	100,500,000	( <sup>2</sup> )			
	1889	8,000,000	50,000,000	( <sup>2</sup> )			
British India.....	1909	1,801,000,000	50,000,000	518,000		73,764,000	2,918,000,000
	1899	837,500,000	85,000,000	772,000		27,755,000	2,200,000,000
	1889	1,200,000,000	72,000,000	463,000		15,000,000	1,800,000,000
Japan.....	1909	( <sup>3</sup> )		30,135,000		18,963,000	
	1899	( <sup>3</sup> )		12,388,000		24,161,000	
	1889	( <sup>3</sup> )		7,828,000		( <sup>3</sup> )	
China.....	1909	300,000,000	42,253,600	35,607,000			
	1899	200,000,000	35,000,000	34,344,000			
	1889	200,000,000	( <sup>3</sup> )	21,771,000			
Egypt.....	1909	455,500,000	3,000,000				
	1899	647,500,000	3,000,000				
	1889	291,000,000	2,800,000				
Australia and New Zealand.....	1909		756,500,000				
	1899		510,000,000				
	1889		550,000,000				
All other countries.....	1909	235,000,000	399,613,000	7,001,000	51,721,000	3,748,000	
	1899	145,000,000	600,600,000	4,053,000	63,431,000	2,615,000	
	1889	152,000,000	456,825,000	1,702,000	75,475,000	15,000,000	

<sup>1</sup> Does not include Tussah silk.

<sup>2</sup> Except for the United States and the United Kingdom, the figures are for 1900.

<sup>3</sup> Except for the United States, the figures relate to 1891.

<sup>4</sup> The figures relate to 1908.

<sup>5</sup> Included in "all other countries."

<sup>6</sup> The figures relate to 1902.

<sup>7</sup> The figures relate to 1895.

<sup>8</sup> Exports, instead of production.

The United States produced 31 per cent of the total for all textile fibers for 1909, as shown in Table 20, and of the two most important fibers, cotton and wool combined, 49 per cent. Every year the world is becoming more and more dependent upon cotton to supply the increasing demands of the textile industry for fiber. In 1909 the United States, which is expected to produce regularly about two-thirds of the world's supply of cotton, produced only 61 per cent of the supply, the shortage bringing the cotton-manufacturing industry of the world during the following year into the most acute situation in which it has been since the period immediately following the Civil War.

The relative importance of the textile fibers named in the table has undergone considerable change during the past century. Flax fiber, which was used to a larger extent than any other in 1800, now ranks fourth, and the quantity of flax produced is only about three times as large as it was at the beginning of the last century. In the same period the production of wool has increased from about 500,000,000 pounds to nearly 2,800,000,000 pounds, or more than fivefold, and the production of cotton from about 300,000,000 pounds to 8,505,000,000 pounds, or more than twenty-eightfold. The increase in the production of jute is the most remarkable of all. The quantity in 1850 was 60,000,000 pounds, as compared with 2,918,000,000 pounds in 1909. The increases since 1889 are as follows: Cotton, 45 per cent; wool, 14 per cent; silk, 112 per cent; flax, 86 per cent; and jute, 57 per cent, while hemp shows a decrease. If the figures for 1908 were taken as the basis of comparison, the increase in the production of cotton since 1889 would be 72 per cent.

The total production for 1909 of the leading textile fibers, as shown in the table, was 17,596,862,000 pounds, of which cotton constituted 48 per cent; wool, 16 per cent; silk, less than one-half of 1 per cent; flax, 11 per cent; hemp, 8 per cent; and jute, 17 per cent. The total supply of these textile fibers in commercial channels at the beginning of the nineteenth century amounted to approximately 1,400,000,000 pounds, of which cotton formed about 22 per cent; wool, 33 per cent; silk, 2 per cent; and flax, 43 per cent.

*Wool.*—Of all textile fibers, wool is one of the most interesting. The wide range within which the production of wool is possible, together with the desirable qualities it possesses as a material for clothing, have made it a most important factor in the history of civilization, and the wool-manufacturing industry has a place in practically all countries. In recent years the wool-growing industry in Europe and America has not kept up with the development in newer countries, nor has the world's wool supply kept pace with the requirements. Nearly one-half of the world's present commercial supply of wool is produced in Australia, New Zealand, and Argentina.

During the 20 years covered by Table 20, the production of wool in the United States increased only 21 per cent, while the population increased nearly 50 per cent. Since in 1870 imports of raw wool amounted to about 23 per cent of the requirements of the manufacturers and in 1909 to more than 44 per cent, it is evident that the country is becoming more and more dependent on foreign countries for its supply. The manufacturers have met the insufficient wool supply by using substitute fibers, especially cotton of wool-like characteristics, of which rough Peruvian is the most important variety.

*Silk.*—The world's production of animal silk has increased 112 per cent during the 20 years for which statistics are given in the table. The leading countries in silk production are, in the order of their importance, China, Japan, and Italy. The demand for silk in recent years has been so much in excess of the supply that in 1909, 30 factories in the United States and Europe were engaged in manufacturing artificial silk, the quantity produced amounting to 12,000,000 pounds.<sup>1</sup> The American mills, of which there were five, having as yet scarcely passed the experimental stage, produced only a negligible portion of this artificial fiber, but the United States consumed 882,000 pounds in the same year, using it largely in making lace trimmings, passementeries, and millinery decorations.

*Flax.*—Flax was among the plants earliest cultivated for a commercial fiber. Previous to the introduction of the cotton gin, its cultivation was more or less general throughout the world and its fiber was used more extensively than that of any other plant. Among the vegetable fibers, flax now ranks next to cotton in commercial value, although a smaller quantity of it is produced than of the cheaper fiber, jute. Russia produces more flax fiber than all the rest of the world combined, but the best comes from Belgium. The production of flax fiber in the United States in 1909 is estimated at 4,000,000 pounds, not including the tow prepared from broken flax straw, the quantity of which is estimated at not less than 75,000,000 pounds. This tow is produced chiefly from the straw of a flax grown primarily for the manufacture of linseed oil, and is used largely for heavy linings, such as those of refrigerator cars. A large quantity of tow is used for upholstering, and only a relatively small amount in the textile industry.

*Hemp.*—The importance of hemp among the commercial fibers of the world is decreasing, both relatively and absolutely. Its cultivation originated in Western Asia long before the Christian era, and, until cotton came into importance commercially, it ranked second only to flax among the vegetable fibers. Hemp is extensively cultivated in Russia, Austria-Hungary,

<sup>1</sup> This artificial fiber is not included in the statistics of Table 20.

and Italy, almost all of the world's commercial supply, as shown in Table 20, being produced in these three countries. Its production during the past 30 or 40 years has declined greatly, owing to the increasing use of jute, manila hemp, sisal, and other fibers. The decline in the hemp-growing industry in the United States has been remarkable. In 1909 the production in this country was only about 10,000,000 pounds, compared with 23,000,000 pounds 20 years before, and with about 150,000,000 pounds 50 years ago. Practically all the American crop is grown in Kentucky, though some is produced in California, Illinois, and Nebraska.

*Jute.*—Jute, the cheapest of the six principal commercial fibers shown in Table 20, is used in greater quantities than any other except cotton. Practically the entire world's supply comes from India, where its production is rapidly increasing. Experiments show that it may be grown in the southern part of the United States, but expensive labor and the lack of machinery for the proper preparation of the fiber are deterrents to its production. The manufacture of jute did not gain a firm footing in the United States until at the time of the Civil War, when it was found in the search for substitutes for cotton, that jute could be used for making bags and other articles previously made from cotton. Dundee, Scotland, became the chief center of the jute industry, and held first place until the recent remarkable development of the industry in British India. About 50 mills are engaged in the manufacture of jute in India, and they employ nearly 200,000 persons. Of the total production of jute in India in 1909, about 48 per cent was consumed in that country, 14 per cent in Great Britain, 8 per cent in Germany, and about 7 per cent in the United States.

*Other fibers.*—In addition to the fibers named in Table 20, manila hemp, sisal, New Zealand hemp, istle (or Tampico fiber), ramie, and several others are consumed in large quantities, especially in the manufacture of cordage and twine.

Of manila hemp, 460,800,000 pounds were produced in the Philippines in 1909, where in connection with its growth a new industry has sprung up within the last 20 months, in response to a demand by European countries for a hemp thread 1,000 feet long. The natives knot the pure white, best grade fiber, and from this the latest Parisian straw hats are made.<sup>1</sup> The hats, which wear better than hats made from other materials, are woven so expertly as to present exact counterparts of silk and straw shapes. Manila hemp supplies the material from which the best binder twine is produced. The better grades of this fiber are also the only satisfactory material known for making

hawsers, ships' cables, and other marine cordage which may be exposed to salt water, or for hoisting and transmission ropes to be used where great strength and flexibility are required.

The production of sisal on a commercial scale is limited to its native country, Yucatan, and certain of the West Indies. It is a harsher and less flexible fiber than manila hemp, with which it is frequently mixed in manufacture, but, next to manila, it is the strongest and most extensively used of the hard fibers. Cordage made from it does not resist the destructive action of salt water, and, because of its lack of flexibility, it can not be used to advantage for running over pulleys or in power transmission. It is used in the manufacture of binder twine, lariats, and general cordage, aside from derrick ropes and marine cordage.

The New Zealand hemp is commercially produced only in New Zealand. By the exercise of great care in the preparation of the fiber, hemp as soft and fine as the better grades of flax is produced, which may be spun and woven into goods closely resembling linen. New Zealand hemp, however, is largely used as a substitute for sisal in the manufacture of binder twine, baling rope, and medium grades of cordage, and is much used for mixing with manila or sisal in making higher-priced cordage.

Istle or Tampico fiber is secured from a plant which grows chiefly in Mexico. Istle has long been used as a substitute for bristles in brushes, and its use is now being extended to the manufacture of the cheaper twines and the medium grades of cordage.

Of these fibers, ramie is probably destined to become the most important. It is grown chiefly in China, Japan, India, and Java, and experiments have proved that it can be cultivated in the United States. The successful operation of a decorticating machine, to separate the fiber from the other portions of the stalk, would advance the production of ramie in this country. The fiber is suitable for use in nearly all lines of goods made from silk or linen yarns. A market has been established for hosiery and knit goods made from ramie, incandescent gas-mantle frames are being made from it, and increasing quantities of the fiber are being used in the manufacture of union silk goods.<sup>2</sup>

Another fiber which is being used in increasing quantities as a substitute for cotton is kapoc, sometimes called vegetable silk. It consists of the hairs of the pods of the kapoc tree, which grows in the tropics, Java furnishing the greater portion of that which enters into commerce. A patented process for preparing kapoc for spinning with cotton adds less than 0.7 of a cent to its price, which ranges from 9 to 16 cents per pound. The prepared fibers are mixed with

<sup>1</sup> Manila Times.

<sup>2</sup> Dr. L. H. Dewey, United States Department of Agriculture.

cotton in the proportion of 6 to 4 for the manufacture of thread and cloth. Because of its great buoyancy, attention is being directed toward its use for life preservers. The kapoc fiber, however, is most largely used in the manufacture of mattresses and in upholstering.

Table 21 shows for the United States the production, imports, exports, and consumption of the leading fibers for 1909, 1899, and 1889, together with the value per pound of the imports and exports, respectively.

TABLE 21.—AMERICAN PRODUCTION, IMPORTS, EXPORTS, AND CONSUMPTION OF THE LEADING RAW TEXTILE FIBERS: 1909, 1899, AND 1889.

[The statistics for production were collected by the Bureau of the Census, except for wool, flax, and hemp for 1909. Those for imports and exports were obtained from the reports of the Bureau of Statistics, Department of Commerce and Labor. For some of the other figures, nonofficial sources have been consulted, and for these only an approximation to the facts is claimed. The statistics for production are for the growth year, those for imports and exports for the fiscal year beginning July 1, and those for consumption for the year beginning September 1.]

FIBER.	Year.	Production <sup>1</sup> (pounds).	IMPORTS.			EXPORTS (INCLUDING REEXPORTS).			Consumption (pounds).
			Quantity (pounds).	Value.	Average value per pound.	Quantity (pounds).	Value.	Average value per pound.	
Cotton .....	1909	5,157,691,000	70,098,000	\$15,500,000	\$0.204	3,242,215,000	\$400,868,000	\$0.142	2,279,501,000
	1899	4,729,908,000	67,399,000	7,961,000	0.118	3,083,811,000	242,001,000	0.078	1,023,703,000
	1889	3,736,256,000	8,600,000	1,393,000	0.162	2,404,434,000	251,008,000	0.102	1,193,375,000
Wool and hair of the alpaca goat and other like animals.	1909	328,000,000	203,940,000	51,221,000	0.104	3,027,000	860,000	0.231	2,588,013,000
	1899	310,000,000	155,928,000	20,261,000	0.130	7,903,000	1,219,000	0.154	473,528,000
	1889	270,000,000	105,431,000	15,264,000	0.145	3,520,000	580,000	0.168	425,000,000
Silk, including cocoons .....	1909	.....	20,363,000	65,425,000	3.213	93,000	336,000	3.602	2,20,270,000
	1899	.....	11,289,000	44,568,000	3.956	119,000	453,000	3.790	10,330,000
	1889	.....	6,103,000	23,374,000	3.828	19,000	78,000	4.101	0,654,000
Flax .....	1909	4,090,000	28,585,000	3,530,000	0.124	121,000	13,000	0.108	2,34,004,000
	1899	840,000	15,000,000	1,046,000	0.105	11,000	85	0.009	10,381,000
	1889	241,000	18,028,000	2,188,000	0.121	.....	.....	.....	2,18,209,000
Hemp .....	1909	10,100,000	14,388,000	1,040,000	0.072	925,000	59,000	0.063	2,23,503,000
	1899	11,751,000	7,610,000	450,000	0.059	836,000	17,000	0.051	25,589,000
	1889	23,000,000	81,904,000	7,342,000	0.090	550,000	54,000	0.098	1,04,408,000
Jute .....	1909	.....	152,667,000	3,728,000	0.024	876,000	30,000	0.034	2,151,791,000
	1899	.....	230,032,000	3,956,000	0.017	60,000	1,000	0.016	2,06,250,000
	1889	.....	202,493,000	3,250,000	0.016	939,000	11,000	0.011	2,201,554,000
Manila .....	1909	.....	208,887,000	10,517,000	0.050	19,532,000	1,345,000	0.069	2,189,355,000
	1899	.....	95,478,000	7,172,000	0.075	2,287,000	246,000	0.108	123,242,000
	1889	.....	( <sup>2</sup> )	( <sup>2</sup> )	.....	( <sup>2</sup> )	( <sup>2</sup> )	.....	( <sup>2</sup> )
Sisal .....	1909	.....	223,924,000	11,441,000	0.050	2,211,000	128,000	0.058	2,221,713,000
	1899	.....	172,303,000	11,782,000	0.068	3,120,000	206,000	0.066	146,353,000
	1889	.....	( <sup>2</sup> )	( <sup>2</sup> )	.....	( <sup>2</sup> )	( <sup>2</sup> )	.....	( <sup>2</sup> )
Other vegetable fibers .....	1909	.....	55,716,000	2,157,000	0.039	1,781,000	80,000	0.050	2,53,935,000
	1899	.....	37,410,000	1,806,000	0.034	4,151,000	202,000	0.049	2,33,259,000
	1889	.....	135,059,000	7,762,000	0.057	4,856,000	311,000	0.064	130,203,000

<sup>1</sup> Quantities are given in gross-weight figures.

<sup>2</sup> Consumption figures arrived at by subtraction.

<sup>3</sup> Includes manila.

<sup>4</sup> Arrived at by subtraction. Manila hemp is included.

<sup>5</sup> Included under "hemp."

<sup>6</sup> Included under "other vegetable fibers."

<sup>7</sup> Includes sisal.

<sup>8</sup> Arrived at by subtraction. Sisal is included.

The aggregate quantity of textile materials produced in the United States in 1909, as shown in the table, was 5,499,791,000 pounds. In 1889 the production of textile fibers in the United States amounted to 4,029,497,000 pounds, which indicates an increase of 36 per cent in the 20 years preceding. During that period the imports of textile materials increased 87 per cent and the exports 32 per cent. Since 1889 the consumption has increased from

2,079,463,000 pounds to 3,563,105,000 pounds, or 71 per cent.

In the consumption of silk the United States ranks next to China, utilizing more than one-fifth of the raw silk product of the world. The increasing importance of manila, sisal, and istle for use in the manufacture of cordage and twine is noteworthy. By far the greater portion of the quantity of jute imported is used in the manufacture of bagging for covering cotton bales.